Human herpesvirus 3 (strain Dumas) complete genome

GenBank: X04370.1

FASTA Graphics

```
LOCUS       X04370              124884 bp    DNA     linear   VRL 18-APR-2005
DEFINITION  Human herpesvirus 3 (strain Dumas) complete genome.
ACCESSION   X04370 M14891 M16612
VERSION     X04370.1
KEYWORDS    ATPase subunit of terminase; complete genome; deoxypyrimidine
            kinase; deoxyribonuclease; deoxyuridine triphosphatase; DNA
            polymerase catalytic subunit; envelope protein; glycoprotein;
            helicase; host shut-off factor; major capsid protein; major capsid
            scaffold protein; minor capsid protein; minor capsid protein
            binding protein; nuclear matrix protein; nuclear
            membrane-associated phosphoprotein; portal protein; primase;
            processivity factor; protease; ribonucleotide reductase;
            ring-finger protein; serine-threonine protein kinase;
            single-stranded DNA-binding protein; small capsid protein;
            terminase subunit; thymidylate synthase; transcription regulator;
            uracil-DNA glycosylase.
SOURCE      Human herpesvirus 3 strain Dumas
  ORGANISM  Human herpesvirus 3 strain Dumas
            Viruses; Duplodnaviria; Heunggongvirae; Peploviricota;
            Herviviricetes; Herpesvirales; Herpesviridae; Alphaherpesvirinae;
            Varicellovirus.
REFERENCE   1  (bases 1 to 124884)
  AUTHORS   Davison,A.J. and Scott,J.E.
  TITLE     The complete DNA sequence of varicella-zoster virus
  JOURNAL   J. Gen. Virol. 67 (PT 9), 1759-1816 (1986)
   PUBMED   3018124
FEATURES             Location/Qualifiers
     source          1..124884
                     /organism="Human herpesvirus 3 strain Dumas"
                     /mol_type="genomic DNA"
                     /strain="Dumas"
                     /db_xref="taxon:10338"
                     /note="acronym:HHV-3=VZV"
     misc_feature    88..89
                     /note="TRL/UL boundary"
     CDS             173..562
                     /function="putative transmembrane protein"
                     /note="unnamed protein product; ORF0;
                     orthologue of HHV-1 UL56"
                     /codon_start=1
                     /protein_id="CAG46438.1"
```

/db_xref="GOA:Q6F6K2"
/db_xref="UniProtKB/Swiss-Prot:Q6F6K2"
/translation="MATVHYSRRPGTPPVTLTSSPSMDDVATPIPYLPTYAEAVADAP
PPYRSRESLVFSPPLFPHVENGTTQQSYDCLDCAYDGIHRLQLAFLRIRKCCVPAFLI
LFGILTLTAVVVAIVAVFPEEPPNSTT"
regulatory complement(588..593)
/regulatory_class="polyA_signal_sequence"
/note="ORF1"
CDS complement(589..915)
/function="putative transmembrane protein"
/note="unnamed protein product; ORF1"
/codon_start=1
/protein_id="CAA27884.1"
/db_xref="GOA:P09266"
/db_xref="UniProtKB/Swiss-Prot:P09266"
/translation="MSRVSEYGVPEGVRESDSDTDSVFMYQHTELMQNNASPLVVQTR
PPAVLIPLVDVPRPRSRRKASAQLKMQMDRLCNVLGVVLQMATLALVTYIAFVVHTRA
TSCKRE"
CDS 1134..1850
/note="unnamed protein product; ORF2"
/codon_start=1
/protein_id="CAA27885.1"
/db_xref="GOA:P09267"
/db_xref="InterPro:IPR010741"
/db_xref="UniProtKB/Swiss-Prot:P09267"
/translation="MHVISETLAYGHVPAFIMGSTLVRPSLNATAEENPASETRCLLR
VLAGRTVDLPGGGTLHITCTKTYVIIGKYSKPGERLSLARLIGRAMTPGGARTFIILA
MKEKRSTTLGYECGTGLHLLAPSMGTFLRTHGLSNRDLCLWRGNIYDMHMQRLMFWEN
IAQNTTETPCITSTLTCNLTEDSGEAALTTSDRPTLPTLTAQGRPTVSNIRGILKGSP
RQQPVCHRVRFAEPTEGVLM"
regulatory 1857..1862
/regulatory_class="polyA_signal_sequence"
/note="ORF2"
regulatory complement(1890..1895)
/regulatory_class="polyA_signal_sequence"
/note="ORF3"
CDS complement(1908..2447)
/note="unnamed protein product; ORF3;
orthologue of HHV-1 UL55"
/codon_start=1
/protein_id="CAA27886.1"
/db_xref="GOA:P09268"
/db_xref="InterPro:IPR007622"
/db_xref="UniProtKB/Swiss-Prot:P09268"

/translation="MDTTGASESSQPIRVNLKPDPLASFTQVIPPLALETTWTCPANS
HAPTPSPLYGVKRLCALRATCGRADDLHAFLIGLGRRDKPSESPMYVDLQPFCSLLNS
QRLLPEMANYNTLCDAPFSAATQQMMLESGQLGVHLAAIGYHCHCKSPFSAECWTGAS
EAYDHVVCGGKARAAVGGL"

regulatory complement(2777..2782)
/regulatory_class="polyA_signal_sequence"
/note="ORF4"

CDS complement(2783..4141)
/function="post-transcriptional regulator of gene
expression"
/note="unnamed protein product; ORF4;
orthologue of HHV-1 UL54"
/codon_start=1
/protein_id="CAA27887.1"
/db_xref="GOA:P09269"
/db_xref="InterPro:IPR008648"
/db_xref="UniProtKB/Swiss-Prot:P09269"
/translation="MASASIPTDPDVSTICEDFMNLLPDEPSDDFALEVTDWANDEAI
GSTPGEDSTTSRTVYVERTADTAYNPRYSKRRHGRRESYHHNRPKTLVVVLPDSNHHG
GRDVETGYARIERGHRRSSRSYNTQSSRKHRDRSLSNRRRRPTTPPAMTTGERNDQTH
DESYRLRFSKRDARRERIRKEYDIPVDRITGRAIEVVSTAGASVTIDSVRHLDETIEK
LVVRYATIQEGDSWASGGCFPGIKQNTSWPELMLYGHELYRTFESYKMDSRIARALRE
RVIRGESLIEALESADELLTWIKMLAAKNLPIYTNNPIVATSKSLLENLKLKLGPFVR
CLLLNRDNDLGSRTLPELLRQQRFSDITCITTYMFVMIARIANIVVRGSKFVEYDDIS
CNVQVLQEYTPGSCLAGVLEALITHQRECGRVECTLSTWAGHLSDARPYGKYFKCSTF
NC"

CDS complement(4252..5274)
/note="ORF5;
orthologue of HHV-1 UL53"
/codon_start=1
/product="virion glycoprotein gK"
/protein_id="CAA27888.1"
/db_xref="GOA:P09261"
/db_xref="InterPro:IPR002567"
/db_xref="UniProtKB/Swiss-Prot:P09261"
/translation="MQALGIKTEHFIIMCLLSGHAVFTLWYTARVKFEHECVYATTVI
NGGPVVWGSYNNSLIYVTFVNHSTFLDGLSGYDYSCRENLLSGDTMVKTAISTPLHDK
IRIVLGTRNCHAYFWCVQLKMIFFAWFVYGMYLQFRRIRRMFGPFRSSCELISPTSYS
LNYVTRVISNILLGYPYTKLARLLCDVSMRRDGMSKVFNADPISFLYMHKGVTLLMLL
EVIAHISSGCIVLLTLGVAYTPCALLYPTYIRILAWVVVCTLAIVELISYVRPKPTKD
NHLNHINTGGIRGICTTCCATVMSGLAIKCFYIVIFAIAVVIFMHYEQRVQVSLFGES
ENSQKH"

CDS complement(5326..8577)
/function="component of DNA helicase-primase complex"

/note="ORF6;
orthologue of HHV-1 UL52"
/codon_start=1
/product="primase"
/protein_id="CAA27889.1"
/db_xref="GOA:P09270"
/db_xref="InterPro:IPR004340"
/db_xref="UniProtKB/Swiss-Prot:P09270"
/translation="MDKSSKPTIRLLFATKGCAISHSLLLLTGQISTEPLYVVSYTWT
PDLDDVFVKNGREEITQVIPTKRPREVTENDEENQIMHLFCSRDVNVIFYLIGGFSTG
DVRSRVWPIFFCCFKTQTDFKALYKALWYGAPLNPHIISDTLCISETFDIHSEVIQTL
MVTTHHLNRKGLSDNGLCITEATLCKLVKKSVGRQELTSLYAHYERQVLAAYRRLYWG
YGCSPFWYIVRFGPSEKTLVLATRYYLLQTDTSYNTLETPLYDLQAIKDLFLTYQVPA
LPNCSGYNISDLLSFDKLSMFCCSSTYTRGLTAKNALSYILQRIHTDTTEIHAVSEYI
TNDRKGLKVPDREFVDYIYLAHFECFNRKQIADHLQAVTYSDFVNKPVLLKSSNLGKR
ATANFFNHVRSRLNMRDYIKKNVICDVTELGPEIGHKYTITKTYTLSLTYAAKPSKFI
GVCDLATTLTRRVENIEKQFSPYGWSSTIPSNPPGFDELSNFEDSGVSAEALRAANFA
NDTPNQSGRTGFDTSPGITKLLLFFSAATGIATHDVSILSYKTPLEALIGHSEVTGPM
PVYRVALPHGAQAFAVIANDTWSSITNRYTLPHEARLIAEDLKQINPCNFVAASLRDM
QLTLLLSTSVKNVSKISSNIPKDQLYINRNELFNTNLIITNLILDVDFHIRKPIPLGI
LHAGMRAFRHGILTAMQLLFPKAVVNPNKDPCYFYKTACPEPTVEVLDDDNLLDITSH
SDIDFYIENGELYTCVEENYTEDVWFFDTQTTSEVHTHADVSNNENLHETLPCNCKEK
IGFRVCVPIPNPYALVGSSTLKGFAQILQQAVLLEREFVEYIGPYLRDFSFIDTGVYS
HGHSLRLPFFSKVTTTGTAVGQLLPFYVVPEQCIDILAFVTSHRNPANFHFHSRPQSN
VPVQFILHNLGGEYAEFFERKVARNKQIFSSPQISLTKALKERGVTCLDAFTLEAFVD
STILESIVEHIAVHFPGRDREYTLTSSKCIAIKRDWVLFQLICGTKGFTCLRYPHRGG
RTAPRTFVSLRVDHHNRLCISLAQQCFATKCDSNRMHTIFTLEVPNYPNLTSS"
CDS 8607..9386
/function="tegument protein"
/note="unnamed protein product; ORF7;
orthologue of HHV-1 UL51"
/codon_start=1
/protein_id="CAA27890.1"
/db_xref="GOA:P09271"
/db_xref="InterPro:IPR007625"
/db_xref="UniProtKB/Swiss-Prot:P09271"
/translation="MQTVCASLCGYARIPTEEPSYEEVRVNTHPQGAALLRLQEALTA
VNGLLPAPLTLEDVVASADNTRRLVRAQALARTYAACSRNIECLKQHHFTEDNPGLNA
VVRSHMENSKRLADMCLAAITHLYLSVGAVDVTTDDIVDQTLRMTAESEVVMSDVVLL
EKTLGVVAKPQASFDVSHNHELSIAKGENVGLKTSPIKSEATQLSEIKPPLIEVSDNN
TSNLTKKTYPTETLQPVLTPKQTQDVQRTTPAIKKSHVMLV"
regulatory 9394..9399
/regulatory_class="polyA_signal_sequence"
/note="ORF7"

```
regulatory      complement(9426..9431)
                /regulatory_class="polyA_signal_sequence"
                /note="ORF8"
CDS             complement(9477..10667)
                /note="ORF8;
                orthologue of HHV-1 UL50"
                /codon_start=1
                /product="deoxyuridine triphosphatase"
                /protein_id="CAA27891.1"
                /db_xref="GOA:P09254"
                /db_xref="InterPro:IPR008180"
                /db_xref="UniProtKB/Swiss-Prot:P09254"
                /translation="MNEAVIDPILETAVNTGDMFCSQTIPNRCLKDTILIEVQPECAD
                TLQCVLDDKVSRHQPLLLRNHKKLELPSEKSVTRGGFYMQQLELLVKSAPPNEYALLL
                IQCKDTALADEDNFFVANGVIDAGYRGVISALLYYRPGVTVILPGHLTIYLFPVKLRQ
                SRLLPKNVLKHLDPIFKSIQVQPLSNSPSNYEKPVIPEFADISTVQQGQPLHRDSAEY
                HIDVPLTYKHIINPKRQEDAGYDICVPYNLYLKRNEFIKIVLPIIRDWDLQHPSINAY
                IFGRSSKSRSGIIVCPTAWPAGEHCKFYVYNLTGDDIRIKTGDRLAQVLLIDHNTQIH
                LKHNVLSNIAFPYAIRGKCGIPGVQWYFTKTLDLIATPSERGTRGFGSTDKETNDVDF
                LLKH"
CDS             10642..10905
                /function="disulphide-linked to gM"
                /note="ORF9A;
                orthologue of HHV-1 UL49A"
                /codon_start=1
                /product="envelope protein gN"
                /protein_id="CAH19068.1"
                /db_xref="GOA:Q65ZG0"
                /db_xref="InterPro:IPR008647"
                /db_xref="UniProtKB/Swiss-Prot:Q65ZG0"
                /translation="MGSITASFILITMQILFFCEDSSGEPNFAERNFWHASCSARGVY
                IDGSMITTLFFYASLLGVCVALISLAYHACFRLFTRSVLRSTW"
CDS             11009..11917
                /function="tegument protein"
                /note="unnamed protein product; ORF9;
                orthologue of HHV-1 UL49"
                /codon_start=1
                /protein_id="CAA27892.1"
                /db_xref="GOA:P09272"
                /db_xref="InterPro:IPR006908"
                /db_xref="UniProtKB/Swiss-Prot:P09272"
                /translation="MASSDGDRLCRSNAVRRKTTPSYSGQYRTARRSVVVGPPDDSDD
                SLGYITTVGADSPSPVYADLYFEHKNTTPRVHQPNDSSGSEDDFEDIDEVVAAFREAR
                LRHELVEDAVYENPLSVEKPSRSFTKNAAVKPKLEDSPKRAPPGAGAIASGRPISFST
```

APKTATSSWCGPTPSYNKRVFCEAVRRVAAMQAQKAAEAAWNSNPPRNNAELDRLLTG
AVIRITVHEGLNLIQAANEADLGEGASVSKRGHNRKTGDLQGGMGNEPMYAQVRKPKS
RTDTQTTGRITNRSRARSASRTDTRK"

regulatory 11959..11964
/regulatory_class="polyA_signal_sequence"
/note="ORF9"

CDS 12160..13392
/function="tegument protein"
/function="transactivator of immediate-early genes"
/note="unnamed protein product; ORF10;
orthologue of HHV-1 UL48"
/codon_start=1
/protein_id="CAA27893.1"
/db_xref="GOA:P09265"
/db_xref="InterPro:IPR003174"
/db_xref="UniProtKB/Swiss-Prot:P09265"
/translation="MECNLGTEHPSTDTWNRSKTEQAVVDAFDESLFGDVASDIGFET
SLYSHAVKTAPSPPWVASPKILYQQLIRDLDFSEGPRLLSCLETWNEDLFSCFPINED
LYSDMMVLSPDPDDVISTVSTKDHVEMFNLTTRGSVRLPSPPKQPTGLPAYVQEVQDS
FTVELRAREEAYTKLLVTYCKSIIRYLQGTAKRTTIGLNIQNPDQKAYTQLRQSILLR
YYREVASLARLLYLHLYLTVTREFSWRLYASQSAHPDVFAALKFTWTERRQFTCAFHP
VLCNHGIVLLEGKPLTASALREINYRRRELGLPLVRCGLVEENKSPLVQQPSFSVHLP
RSVGFLTHHIKRKLDAYAVKHPQEPRHVRADHPYAKVVENRNYGSSIEAMILAPPSPS
EILPGDPPRPPTCGFLTR"

regulatory 13416..13421
/regulatory_class="polyA_signal_sequence"
/note="ORF10"

CDS 13590..16049
/function="tegument protein"
/note="unnamed protein product; ORF11;
orthologue of HHV-1 UL47"
/codon_start=1
/protein_id="CAA27894.1"
/db_xref="GOA:P09263"
/db_xref="InterPro:IPR005029"
/db_xref="UniProtKB/Swiss-Prot:P09263"
/translation="MQSGHYNRRQSRRQRISSNTTDSPRHTHGTRYRSTNWYTHPPQI
LSNSETLVAVQELLNSEMDQDSSSDASDDFPGYALHHSTYNGSEQNTSTSRHENRIFK
LTEREANEEININTDAIDDEGEAEEGEAEEDAIDDEGEAEEGEAEEDAIDDEGEAEEG
EAEEDAIDDEGEAEEGEAEEGEAEEGEAEEDAIDDEGEAEEDAAEEDAIDDEGEAEED
YFSVSQVCSRDADEVYFTLDPEISYSTDLRIAKVMEPAVSKELNVSKRCVEPVTLTGS
MLAHNGFDESWFAMRECTRREYITVQGLYDPIHLRYQFDTSRMTPPQILRTIPALPNM
TLGELLLIFPIEFMAQPISIERILVEDVFLDRRASSKTHKYGPRWNSVYALPYNAGKM
YVQHIPGFYDVSLRAVGQGTAIWHHMILSTAACAISNRISHGDGLGFLLDAAIRISAN

CIFLGRNDNFGVGDPCWLEDHLAGLPREAVPDVLQVTQLVLPNRGPTVAIMRGFFGAL
AYWPELRIAISEPSTSLVRYATGHMELAEWFLFSRTHSLKPQFTPTEREMLASFFTLY
VTLGGGMLNWICRATAMYLAAPYHSRSAYIAVCESLPYYYIPVNSDLLCDLEVLLLGE
VDLPTVCESYATIAHELTGYEAVRTAATNFMIEFADCYKESETDLMVSAYLGAVLLLQ
RVLGHANLLLLLLSGAALYGGCSIYIPRGILDAYNTLMLAASPLYAHQTLTSFWKDRD
DAMQTLGIRPTTDVLPKEQDRIVQASPIEMNFRFVGLETIYPREQPIPSVDLAENLMQ
YRNEILGLDWKSVAMHLLRKY"

repeat_region 13937..14242
/note="reiteration R1"

regulatory 16117..16122
/regulatory_class="polyA_signal_sequence"
/note="ORF11"

CDS 16214..18199
/function="tegument protein"
/note="unnamed protein product; ORF12;
orthologue of HHV-1 UL46"
/codon_start=1
/protein_id="CAA27895.1"
/db_xref="GOA:P09264"
/db_xref="InterPro:IPR005051"
/db_xref="UniProtKB/Swiss-Prot:P09264"
/translation="MFSRFARSFSSDDRTRKSYDGSYQSFNAGERDLPTPTRDWCSIS
QRITSERVRDGCLIPTPGEALETAVKALSEKTDSLTSPVLQSTERHSVLLGLHHNNVP
ESLVVSCMSNDVHDGFMQRYMETIQRCLDDLKLSGDGLWWVYENTYWQYLKYTTGAEV
PVTSEKVNKKSKSTVLLFSSVVANKPISRHPFKSKVINSDYRGICQELREALGAVQKY
MYFMRPDDPTNPSPDTRIRVQEIAAYTATGYGWMLWFLDVVDARVCRHLKLQFRRIRG
PRASVIPDDLLRRHLKTGPAVSAGTGVAFILAATTASALTALLRISVLWRKEEWRDGL
NGTAAAIVAAVELITLLHHHFQYLINMMLIGYACWGDGGLNDPYILKALRAQGRFLYF
AGQLVRTMSTHSWVVLETSTHMWFSRAVAQSILAHGGKPTKYYAQVLAASKRYTPLHL
RRISEPSSVSDQPYIRFNRLGSPIGTGIGNLECVCLTGNYLSDDVNASSHVINTEAPL
NSIAPDTNRQRTSRVLVRPDTGLDVTVRKNHCLDIGHTDGSPVDPTYPDHYTRIKAEY
EGPVRDESNTMFDQRSDLRHIETQASLNDHVYENIPPKEVGFNSSSDLDVDSLNGYTS
GDMHTDDDLSPDFIPNDVPVRCKTTVTFRKNTPKSHH"

CDS 18441..19346
/note="ORF13"
/codon_start=1
/product="thymidylate synthase"
/protein_id="CAA27896.1"
/db_xref="GOA:P09249"
/db_xref="InterPro:IPR000398"
/db_xref="InterPro:IPR020940"
/db_xref="UniProtKB/Swiss-Prot:P09249"
/translation="MGDLSCWTKVPGFTLTGELQYLKQVDDILRYGVRKRDRTGIGTL
SLFGMQARYNLRNEFPLLTTKRVFWRAVVEELLWFIRGSTDSKELAAKDIHIWDIYGS

SKFLNRNGFHKRHTGDLGPIYGFQWRHFGAEYKDCQSNYLQQGIDQLQTVIDTIKTNP
ESRRMIISSWNPKDIPLMVLPPCHTLCQFYVANGELSCQVYQRSGDMGLGVPFNIAGY
ALLTYIVAHVTGLKTGDLIHTMGDAHIYLNHIDALKVQLARSPKPFPCLKIIRNVTDI
NDFKWDDFQLDGYNPHPPLKMEMAL"

regulatory complement(19342..19347)
/regulatory_class="polyA_signal_sequence"
/note="ORF14"

regulatory 19391..19396
/regulatory_class="polyA_signal_sequence"
/note="ORF13"

CDS complement(19431..21113)
/function="role in cell entry"
/note="ORF14;
orthologue of HHV-1 UL44"
/codon_start=1
/product="envelope glycoprotein gC"
/protein_id="CAA27897.1"
/db_xref="GOA:P09256"
/db_xref="InterPro:IPR001038"
/db_xref="InterPro:IPR013783"
/db_xref="UniProtKB/Swiss-Prot:P09256"
/translation="MKRIQINLILTIACIQLSTESQPTPVSITELYTSAATRKPDPAV
APTSAASRKPDPAVAPTSAASRKPDPAVAPTSAASRKPDPAVAPTSAATRKPDPAVAP
TSAASRKPDPAVAPTSAATRKPDPAVAPTSAASRKPDPAANTQHSQPPFLYENIQCVH
GGIQSIPYFHTFIMPCYMRLTTGQQAAFKQQQKTYEQYSLDPEGSNITRWKSLIRPDL
HIEVWFTRHLIDPHRQLGNALIRMPDLPVMLYSNSADLNLINNPEIFTHAKENYVIPD
VKTTSDFSVTILSMDATTEGTYIWRVVNTKTKNVISEHSITVTTYYRPNITVVGDPVL
TGQTYAAYCNVSKYYPPHSVRVRWTSRFGNIGKNFITDAIQEYANGLFSYVSAVRIPQ
QKQMDYPPPAIQCNVLWIRDGVSNMKYSAVVTPDVYPFPNVSIGIIDGHIVCTAKCVP
RGVVHFVWWVNDSPINHENSEITGVCDQNKRFVNMQSSCPTSELDGPITYSCHLDGYP
KKFPPFSAVYTYDASTYATTFSVVAVIIGVISILGTLGLIAVIATLCIRCCS"

repeat_region 20572..20897
/note="reiteration R2"

regulatory complement(21244..21249)
/regulatory_class="polyA_signal_sequence"
/note="ORF15"

CDS complement(21258..22478)
/function="integral membrane protein"
/note="unnamed protein product; ORF15;
orthologue of HHV-1 UL43"
/codon_start=1
/protein_id="CAA27898.1"
/db_xref="GOA:P09273"
/db_xref="InterPro:IPR007764"

/db_xref="UniProtKB/Swiss-Prot:P09273"
/translation="MAVNGERAVHDENLGVLDRELIRAQSIQGCVGNPQECNSCAITS
ASRLFLVGLQASVITSGLILQYHVCEAAVNATIMGLIVVSGLWPTSVKFLRTLAKLGR
CLQTVVVLGFAVLWAVGCPISRDLPFVELLGISISAITGTVAAVHIHYYNFVTTFNGP
HIYFYVMMLGTGLGGLLTVILYMYVSKYEVLIGLCISIVTLVSIVDAATDLQDTCIYR
KNRHKQLNTYTDLGFAVVYTQNDRGRVCDHRESSRTLKRVFKGIRIMSVIPPVLYIVT
PLMWAISHIIKLNHFIKLTQVTLAVSIGGHIIAFGLQGFAVLYQEKKNLWVIVLYTTT
SVTGIAVTFAGISWGAIIILTSTVAAGLTCIQMMRLSVKPIDCFMASHITKVYHVCVY
IIINLCYLCGTYVS"
CDS complement(22568..23794)
/function="subunit of DNA polymerase"
/note="ORF16;
orthologue of HHV-1 UL42"
/codon_start=1
/product="processivity factor"
/protein_id="CAA27899.1"
/db_xref="GOA:P09274"
/db_xref="InterPro:IPR003202"
/db_xref="UniProtKB/Swiss-Prot:P09274"
/translation="MDLRSRTDDALDMELHAGFDAPEIARAVLTEKTLTGLISSISPL
VNRLRDSILIFSDEGLIIHCSLETEQLYIPIPANMFDQYNWTGPRMVVLAATEGRSSL
IDAFRHTKDPSTPTRLYFKFTGQPPERSIIQTMVWQRPGDCGPDDQVQCYKQVVKREL
ACYTMMFPNLTPDISICLKRDQFTRLQRLLKTFGFTTCFILTATDMYIQTAGGGFISF
NVSLDINGSKPTPYNLIRSITNSKRILNNVVYGSGSMREFGVLLETHSGFRSAVQNLK
LTRDETCYINFYLALTNSPMVGLYIQRSAPVHSFFYATFLSPKDLKEKLTSMQLFANM
ESVKDEPPLKKRRNLLTKRNEKNTGNKMGGKLPETTWQEGIGIREYCVAPPVDPAGTL
DYSELSRESDVICTVK"
CDS 24149..25516
/function="tegument protein"
/note="ORF17;
orthologue of HHV-1 UL41"
/codon_start=1
/product="host shut-off factor"
/protein_id="CAA27900.1"
/db_xref="GOA:P09275"
/db_xref="InterPro:IPR006086"
/db_xref="UniProtKB/Swiss-Prot:P09275"
/translation="MGLFGLTRFIHEHKLVKPSIISTPPGVLTPVAVDVWNVMYTLLE
RLYPVGKRENLHGPSVTIHCLGVLLRLLTQRSYYPIFVLERCTDGPLSRGAKAIMSRA
MNHDERGTSDLTRVLLSSNTSCSIKYNKTSETYDSVFRNSSTSCIPSEENKSQDMFLD
GCPRQTDKTICLRDQNVCSLTSTMPSRGHPNHRLYHKLCASLIRWMGYAYVEAVDIEA
DEACANLFHTRTVALVYTTDTDLLFMGCDILLDAIPMFAPVVRCRDLLQYLGITYPEF
LVAFVRCQTDLHTSDNLKSVQQVIQDTGLKVPHQMDTSTRSPTYDSWRHGEVFKSLTV
ATSGKTENGVSVSKYASNRSEVTVDASWALNLLPPSSSPLDNLERAFVEHIIAVVTPL

TRGRLKLMKRVNIMQNTADPYMVINTLYHNLKGEKMARQYARIFKQFIPTPLPLNTVL
TKYWN"

regulatory 25512..25517
/regulatory_class="polyA_signal_sequence"
/note="ORF17"

regulatory complement(25550..25555)
/regulatory_class="polyA_signal_sequence"
/note="ORF18"

CDS complement(25573..26493)
/note="ORF18;
orthologue of HHV-1 UL40"
/codon_start=1
/product="ribonucleotide reductase (small subunit)"
/protein_id="CAA27901.1"
/db_xref="GOA:P09247"
/db_xref="InterPro:IPR000358"
/db_xref="InterPro:IPR009078"
/db_xref="InterPro:IPR012348"
/db_xref="UniProtKB/Swiss-Prot:P09247"
/translation="MDQKDCSHFFYRPECPDINNLRALSISNRWLESDFIIEDDYQYL
DCLTEDELIFYRFIFTFLSAADDLVNVNLGSLTQLFSQKDIHHYYIEQECIEVVHARV
YSQIQLMLFRGDESLRVQYVNVTINNPSIQQKVQWLEEKVRDNPSVAEKYILMILIEG
IFFVSSFAAIAYLRNNGLFVVTCQFNDLISRDEAIHTSASCCIYNNYVPEKPAITRIH
QLFSEAVEIECAFLKSHAPKTRLVNVDAITQYVKFSADRLLSAINVPKLFNTPPPDSD
FPLAFMIADKNTNFFERHSTSYAGTVINDL"

CDS complement(26518..28845)
/note="ORF19;
orthologue of HHV-1 UL39"
/codon_start=1
/product="ribonucleotide reductase (large subunit)"
/protein_id="CAA27902.1"
/db_xref="GOA:P09248"
/db_xref="InterPro:IPR000788"
/db_xref="InterPro:IPR013346"
/db_xref="InterPro:IPR013509"
/db_xref="UniProtKB/Swiss-Prot:P09248"
/translation="MEFKRIFNTVHDIINRLCQHGYKEYIIPPESTTPVELMEYISTI
VSKLKAVTRQDERVYRCCGELIHCRINLRSVSMETWLTSPILCLTPRVRQAIEGRRDE
IRRAILEPFLKDQYPALATLGLQSALKYEDFYLTKLEEGKLESLCQFFLRLAATVTTE
IVNLPKIATLIPGINDGYTWTDVCRVFFTALACQKIVPATPVMMFLGRETGATASCYL
MDPESITVGRAVRAITGDVGTVLQSRGGVGISLQSLNLIPTENQTKGLLAVLKLLDCM
VMAINSDCERPTGVCVYIEPWHVDLQTVLATRGMLVRDEIFRCDNIFCCLWTPDLFFE
RYLSYLKGASNVQWTLFDNRADILRTLHGEAFTSTYLRLEREGLGVSSVPIQDIAFTI
IRSAAVTGSPFLMFKDACNRNYHMNTQGNAITGSNLCTEIVQKADAHQHGVCNLASIN

LTTCLSKGPVSFNLNDLQLTARTTVIFLNGVLAAGNFPCKKSCKGVKNNRSLGIGIQG
LHTTCLRLGFDLTSQPARRLNVQIAELMLYETMKTSMEMCKIGGLAPFKGFTESKYAK
GWLHQDGFSTISYLDLPWCTLRDDICAYGLYNSQFLALMPTVSSAQVTECSEGFSPIY
NNMFSKVTTSGELLRPNLDLMDELRDMYSCEEKRLEVINILEKNQWSVIRSFGCLSNS
HPLLKYKTAFEYEQEDLVDMCAERAPFIDQSQSMTLFIEERPDGTIPASKIMNLLIRA
YKAGLKTGMYYCKIRKATNSGLFAGGELTCTSCAL"

regulatory complement(29005..29010)
/regulatory_class="polyA_signal_sequence"
/note="ORF20"

CDS complement(29024..30475)
/function="component of intercapsomeric triplex"
/note="ORF20;
orthologue of HHV-1 UL38"
/codon_start=1
/product="minor capsid protein binding protein"
/protein_id="CAA27903.1"
/db_xref="GOA:P09276"
/db_xref="InterPro:IPR004999"
/db_xref="UniProtKB/Swiss-Prot:P09276"
/translation="MGSQPTNSHFTLNEQTLCGTNISLLGNNRFIQIGNGLHMTYAPG
FFGNWSRDLTIGPRFGGLNKQPIHVPPKRTETASIQVTPRSIVINRMNNIQINPTSIG
NPQVTIRLPLNNFKSTTQLIQQVSLTDFFRPDIEHAGSIVLILRHPSDMIGEANTLTQ
AGRDPDVLLEGLRNLFNACTAPWTVGEGGGLRAYVTSLSFIAACRAEEYTDKQAADAN
RTAIVSAYGCSRMETRLIRFSECLRAMVQCHVFPHRFISFFGSLLEYTIQDNLCNITA
VAKGPQEAARTDKTSTRRVTANIPACVFWDVDKDLHLSADGLKHVFLVFVYTQRRQRE
GVRLHLALSQLNEQCFGRGIGFLLGRIRAENAAWGTEGVANTHQPYNTRALPLVQLSN
DPTSPRCSIGEITGVNWNLARQRLYQWTGDFRGLPTQLSCMYAAYTLIGTIPSESVRY
TRRMERFGGYNVPTIWLEGVVWGGTNTWNECYY"

CDS 30759..33875
/function="tegument protein"
/note="unnamed protein product; ORF21;
orthologue of HHV-1 UL37"
/codon_start=1
/protein_id="CAA27904.1"
/db_xref="GOA:P09277"
/db_xref="InterPro:IPR005655"
/db_xref="UniProtKB/Swiss-Prot:P09277"
/translation="MEEPICYDTQKLLDDLSNLKVQEADNERPWSPEKTEIARVKVVK
FLRSTQKIPAKHFIQIWEPLHSNICFVYSNTFLAEAAFTAENLPGLLFWRLDLDWTIE
EPGNSLKILTQLSSVVQDSETLHRLSANKLRTSSKFGPVSIHFIITDWINMYEVALKD
ATTAIESPFTHARIGMLESAIAALTQHKFAIIYDMPFVQEGIRVLTQYAGWLLPFNVM
WNQIQNSSLTPLTRALFIICMIDEYLTETPVHSISELFADTVNLIKDEAFVSIEEAVT
NPRTVHESRISSALAYRDPYVFETSPGMLARRLRLDNGIWESNLLSLSTPGIHIEALL
HLLNSDPEAETTSGSNVAEHTRGIWEKVQASTSPSMLISTLAESGFTRFSCKLLRRFI

AHHTLAGFIHGSVVADEHITDFQQTLGCLALVGGLAYQLVETYAPTTEYVLTYTRTVN
ETEKRYETLLPALGLPPGGLGQIMRRCFAPRPLIESIQATRVILLNEISHAEARETTY
FKQTHNQSSGALLPQAGQSAVREAVLTWFDLRMDSRWGITPPVDVGMTPPICVDPPAT
GLEAVMITEALKIAYPTEYNRSSVFVEPSFVPYIIATSTLDALSATIALSFDTRGIQQ
ALSILQWARDYGSGTVPNADGYRTKLSALITILEPFTRTHPPVLLPSHVSTIDSLICE
LHRTVGIAVDLLPQHVRPLVPDRPSITNSVFLATLYYDELYGRWTRLDKTSQALVENF
TSNALVVSRYMLMLQKFFACRFYPTPDLQAVGICNPKVERDEQFGVWRLNDLADAVGH
IVGTIQGIRTQMRVGISSLRTIMADASSALRECENLMTKTSTSAIGPLFSTMASRYAR
FTQDQMDILMRVDKLTTGENIPGLANVEIFLNRWERIATACRHATAVPSAESIATVCN
ELRRGLKNIQEDRVNAPTSYMSHARNLEDHKAAVSFVMDSRQQFIVDSGPQMGAVLTS
QCNIGTWENVNATFLHDNVKITTTVRDVISEAPTLIIGQRWLRPDEILSNVDLRLGVP
GNTSGSDP"

regulatory 33900..33905
/regulatory_class="polyA_signal_sequence"
/note="ORF21"

CDS 34083..42374
/function="tegument protein"
/note="unnamed protein product; ORF22;
orthologue of HHV-1 UL36"
/codon_start=1
/protein_id="CAA27905.1"
/db_xref="GOA:P09278"
/db_xref="InterPro:IPR005210"
/db_xref="InterPro:IPR006928"
/db_xref="UniProtKB/Swiss-Prot:P09278"
/translation="MDIIPPIAVTVAGVGSRNQFDGALGPASGLSCLRTSLSFLHMTY
AHGINATLSSDMIDGCLQEGAAWTTDLSNMGRGVPDMCALVDLPNRISYIKLGDTTST
CCVLSRIYGDSHFFTVPDEGFMCTQIPARAFFDDVWMGREESYTIITVDSTGMAIYRQ
GNISFIFDPHGHGTIGQAVVVRVNTTDVYSYIASEYTHRPDNVESQWAAALVFFVTAN
DGPVSEEALSSAVTLIYGSCDTYFTDEQYCEKLVTAQHPLLLSPPNSTTIVLNKSSIV
PLHQNVGESVSLEATLHSTLTNTVALDPRCSYSEVDPWHAVLETTSTGSGVLDCRRRR
RPSWTPPSSEENLACIDDGLVNNTHSTDNLHKPAKKVLKFKPTVDVPDKTQVAHVLPR
LREVANTPDVVLNVSNVDTPESSPTFSRNMNVGSSLKDRKPFLFEQSGDVNMVVEKLL
QHGHEISNGYVQNAVGTLDTVITGHTNVPIWVTRPLVMPDEKDPLELFINLTILRLTG
FVVENGTRTHHGATSVVSDFIGPLGEILTGFPSAAELIRVTSLILTNMPGAEYAIKTV
LRKKCTIGMLIIAKFGLVAMRVQDTTGALHAELDVLEADLGGSSPIDLYSRLSTGLIS
ILNSPIISHPGLFAELIPTRTGSLSERIRLLCELVSARETRYMREHTALVSSVKALEN
ALRSTRNKIDAIQIPEVPQEPPEETDIPPEELIRRVYEIRSEVTMLLTSAVTEYFTRG
VLYSTRALIAEQSPRRFRVATASTAPIQRLLDSLPEFDAKLTAIISSLSIHPPPETIQ
NLPVVSLLKELIKEGEDLNTDTALVSWLSVVGEAQTAGYLSRREFDELSRTIKTINTR
ATQRASAEAELSCFNTLSAAVDQAVKDYETYNNGEVKYPEITRDDLLATIVRATDDLV
RQIKILSDPMIQSGLQPSIKRRLETRLKEVQTYANEARTTQDTIKSRKQAAYNKLGGL
LRPVTGFVGLRAAVDLLPELASELDVQGALVNLRTKVLEAPVEIRSQLTGDFWALFNQ
YRDILEHPGNARTSVLGGLGACFTAIIEIVPIPTEYRPSLLAFFGDVADVLASDIATV

STNPESESAINAVVATLSKATLVSSTVPALSFVLSLYKKYQALQQEITNTHKLTELQK
QLGDDFSTLAVSSGHLKFISSSNVDDYEINDAILSIQTNVHALMDTVKLVEVELQKLP
PHCIAGTSTLSRVVKDLHKLVTMAHEKKEQAKVLITDCERAHKQQTTRVLYERWTRDI
IACLEAMETRHIFNGTELARLRDMAAAGGFDIHAVYPQARQVVAACETTAVTALDTVF
RHNPYTPENTNIPPPLALLRGLTWFDDFSITAPVFTVMFPGVSIEGLLLLMRIRAVVL
LSADTSINGIPNYRDMILRTSGDLLQIPALAGYVDFYTRSYDQFITESVTLSELRADI
RQAAGAKLTEANKALEEVTHVRAHETAKLALKEGVFITLPSEGLLIRAIEYFTTFDHK
RFIGTAYERVLQTMVDRDLKEANAELAQFRMVCQATKNRAIQILQNIVDTANATEQQE
DVDFTNLKTLLKLTPPPKTIALAIDRSTSVQDIVTQFALLLGRLEEETGTLDIQAVDW
MYQARNIIDSHPLSVRIDGTGPLHTYKDRVDKLYALRTKLDLLRRRIETGEVTWDDAW
TTFKRETGDMLASGDTYATSVDSIKALQASASVVDMLCSEPEFFLLPVETKNRLQKKQ
QERKTALDVVLQKQRQFEETASRLRALIERIPTESDHDVLRMLLRDFDQFTHLPIWIK
TQYMTFRNLLMVRLGLYASYAEIFPPASPNGVFAPIPAMSGVCLEDQSRCIRARVAAF
MGEASVVQTFREARSSIDALFGKNLTFYLDTDGVPLRYRVCYKSVGVKLGTMLCSQGG
LSLRPALPDEGIVEETTLSALRVANEVNELRIEYESAIKSGFSAFSTFVRHRHAEWGK
TNARRAIAEIYAGLITTTLTRQYGVHWDKLIYSFEKHHLTSVMGNGLTKPIQRRGDVR
VLELTLSDIVTILVATTPVHLLNFARLDLIKQHEYMARTLRPVIEAAFRGRLLVRSLD
GDPKGNARAFFNAAPSKHKLPLALGSNQDPTGGRIFAFRMADWKLVKMPQKITDPFAP
WQLSPPPGVKANVDAVTRIMATDRLATITVLGRMCLPPISLVSMWNTLQPEEFAYRTQ
DDVDIIVDARLDLSSTLNARFDTAPSNTTLEWNTDRKVITDAYIQTGATTVFTVTGAA
PTHVSNVTAFDIATTAILFGAPLVIAMELTSVFSQNSGLTLGLKLFDSRHMATDSGIS
SAVSPDIVSWGLRLLHMDPHPIENACLIVQLEKLSALIANKPLTNNPPCLLLLDEHMN
PSYVLWERKDSIPAPDYVVFWGPESLIDLPYIDSDEDSFPSCPDDPFYSQIIAGYAPQ
GPPNLDTTDFYPTEPLFKSPVQVVRSSKCKKMPVRPAQPAQPAQPAQPAQTVQPAQPI
EPGTQIVVQNFKKPQSVKTTLSQKDIPLYVETESETAVLIPKQLTTSIKTTVCKSITP
PNNQLSDWKNNPQQNQTLNQAFSKPILEITSIPTDDSISYRTWIEKSNQTQKRHQNDP
RMYNSKTVFHPVNNQLPSWVDTAADAPQTDLLTNYKTRQPSPNFPRDVHTWGVSSNPF
NSPNRDLYQSDFSEPSDGYSSESENSIVLSLDEHRSCRVPRHVRVVNADVVTGRRYVR
GTALGALALLSQACRRMIDNVRYTRKLLMDHTEDIFQGLGYVKLLLDGTYI"

repeat_region 41454..41519
/note="reiteration R3"

regulatory 42385..42390
/regulatory_class="polyA_signal_sequence"
/note="ORF22"

regulatory complement(42426..42431)
/regulatory_class="polyA_signal_sequence"
/note="ORF23"

CDS complement(42431..43138)
/function="located on tips of hexons"
/note="ORF23;
orthologue of HHV-1 UL35"
/codon_start=1
/product="small capsid protein"
/protein_id="CAA27906.1"

/db_xref="GOA:P09279"
/db_xref="InterPro:IPR007584"
/db_xref="UniProtKB/Swiss-Prot:P09279"
/translation="MTQPASSRVVFDPSNPTTFSVEAIAAYTPVALIRLLNASGPLQP
GHRVDIADARSIYTVGAAASAARARANHNANTIRRTAMFAETDPMTWLRPTVGLKRTF
NPRIIRPQPPNPSMSLGISGPTILPQKTQSADQSALQQPAALAFSGSSPQHPPPQTTS
ASVGQQQHVVSGSSGQQPQQGAQSSTVQPTTGSPPAAQGVPQSTPPPTQNTPQGGKGQ
TLSHTGQSGNASRSRRV"
regulatory complement(43211..43216)
/regulatory_class="polyA_signal_sequence"
/note="ORF24"
CDS complement(43212..44021)
/function="role in nuclear egress"
/note="ORF24;
orthologue of HHV-1 UL34"
/codon_start=1
/product="nuclear membrane-associated phosphoprotein"
/protein_id="CAA27907.1"
/db_xref="GOA:P09280"
/db_xref="InterPro:IPR007626"
/db_xref="UniProtKB/Swiss-Prot:P09280"
/translation="MSRRTYVRSERRRGCGDNLLQRIRLVVPSALQCCDGDLPIFDPQ
RPPARCVFQFNGEDNVSEAFPVEYIMRLMANWAQVDCDPYIKIQNTGVSVLFQGFFFR
PTNAPVAEVSIDSNNVILSSTLSTGINLSALESIKRGGGIDRRPLQALMWVNCFVRMP
YVQLSFRFMGPEDPSRTIKLMARATDAYMYKETGNNLDEYIRWRPSFRSPPENGSPNT
SVQMQSDIKPALPDTQTTRVWKLALPVANVTYALFIVIVLVVVLGAVLFWK"
regulatory complement(44131..44136)
/regulatory_class="polyA_signal_sequence"
/note="ORF25"
CDS complement(44148..44618)
/function="DNA packaging protein"
/note="unnamed protein product; ORF25;
orthologue of HHV-1 UL33"
/codon_start=1
/protein_id="CAA27909.1"
/db_xref="GOA:P09281"
/db_xref="InterPro:IPR005208"
/db_xref="UniProtKB/Swiss-Prot:P09281"
/translation="MYESENASEHHPELEDVFSENTGDSNPSMGSSDSTRSISGMRAR
DLITDTDVNLLNIDALESKYFPADSTFTLSVWFENLIPPEIEAILPTTDAQLNYISFT
SRLASVLKHKESNDSEKSAYVVPCEHSASVTRRRERFAGVMAKFLDLHEILKDA"
CDS 44506..46263
/function="DNA packaging protein"
/note="unnamed protein product; ORF26;

orthologue of HHV-1 UL32"
/codon_start=1
/protein_id="CAA27908.1"
/db_xref="GOA:P09282"
/db_xref="InterPro:IPR002597"
/db_xref="UniProtKB/Swiss-Prot:P09282"
/translation="MDRVESEEPMDGFESPVFSENTSSNSGWCSDAFSDSYIAYNPAL
LLKNDLLFSELLFASHLINVPRAIENNVTYEASSAVGVDNEMTSSTTEFIEEIGDVLA
LDRACLVCRTLDLYKRKFGLTPEWVADYAMLCMKSLASPPCAVVTFSAAFEFVYLMDR
YYLCRYNVTLVGSFARRTLSLLDIQRHFFLHVCFRTDGGLPGIRPPPGKEMANKVRYS
NYSFFVQAVVRAALLSISTSRLDETETRKSFYFNQDGLTGGPQPLAAALANWKDCARM
VDCSSSEHRTSGMITCAERALKEDIEFEDILIDKLKKSSYVEAAWGYADLALLLLSGV
ATWNVDERTNCAIETRVGCVKSYWQANRIENSRDVPKQFSKFTSEDACPEVAFGPILL
TTLKNAKCRGRTNTECMLCCLLTIGHYWIALRQFKRDILAYSANNTSLFDCIEPVINA
WSLDNPIKLKFPFNDEGRFITIVKAAGSEAVYKHLFCDLLCALSELQTNPKILFAHPT
TADKEVLELYKAQLAAQNRFEGRVCAGLWTLAYAFKAYQIFPRKPTANAAFIRDGGLM
LRRHAISLVSLEHTLSKYV"
CDS 46127..47128
/function="role in nuclear egress"
/note="ORF27;
orthologue of HHV-1 UL31"
/codon_start=1
/product="nuclear matrix protein"
/protein_id="CAA27910.1"
/db_xref="GOA:P09283"
/db_xref="InterPro:IPR021152"
/db_xref="UniProtKB/Swiss-Prot:P09283"
/translation="MHLKPTRFFHANQPPMPHSYEMEDLCFDDMQYRWSPSNTPYRSM
SRRYKSVSRSGPSMRVRSRTPCRRQTIRGKLMSKERSVYRHYFNYIARSPPEELATVR
GLIVPIIKTTPVTLPFNLGQTVADNCLSLSGMGYHLGLGGYCPTCTASGEPRLCRTDR
AALILAYVQQLNNIYEYRVFLASILALSDRANMQAASAEPLLSSVLAQPELFFMYHIM
REGGMRDIRVLFYRDGDAGGFMMYVIFPGKSVHLHYRLIDHIQAACRGYKIVAHVWQT
TFLLSVCRNPEQQTETVVPSIGTSDVYCKMCDLNFDGELLLEYKRLYALFDDFVPPR"
regulatory complement(47031..47036)
/regulatory_class="polyA_signal_sequence"
/note="ORF28"
CDS complement(47052..50636)
/note="ORF28;
orthologue of HHV-1 UL30"
/codon_start=1
/product="DNA polymerase catalytic subunit"
/protein_id="CAA27911.1"
/db_xref="GOA:P09252"
/db_xref="InterPro:IPR006133"

/db_xref="InterPro:IPR006134"
/db_xref="InterPro:IPR006172"
/db_xref="InterPro:IPR012337"
/db_xref="InterPro:IPR017964"
/db_xref="UniProtKB/Swiss-Prot:P09252"
/translation="MAIRTGFCNPFLTQASGIKYNPRTGRGSNREFLHSYKTTMSSFQ
FLAPKCLDEDVPMEERKGVHVGTLSRPPKVYCNGKEVPILDFRCSSPWPRRVNIWGEI
DFRGDKFDPRFNTFHVYDIVETTEAASNGDVSRFATATRPLGTVITLLGMSRCGKRVA
VHVYGICQYFYINKAEVDTACGIRSGSELSVLLAECLRSSMITQNDATLNGDKNAFHG
TSFKSASPESFRVEVIERTDVYYYDTQPCAFYRVYSPSSKFTNYLCDNFHPELKKYEG
RVDATTRFLMDNPGFVSFGWYQLKPGVDGERVRVRPASRQLTLSDVEIDCMSDNLQAI
PNDDSWPDYKLLCFDIECKSGGSNELAFPDATHLEDLVIQISCLLYSIPRQSLEHILL
FSLGSCDLPQRYVQEMKDAGLPEPTVLEFDSEFELLIAFMTLVKQYAPEFATGYNIVN
FDWAFIMEKLNSIYSLKLDGYGSINRGGLFKIWDVGKSGFQRRSKVKINGLISLDMYA
IATEKLKLSSYKLDSVAREALNESKRDLPYKDIPGYYASGPNTRGIIGEYCIQDSALV
GKLFFKYLPHLELSAVARLARITLTKAIYDGQQVRIYTCLLGLASSRGFILPDGGYPA
TFEYKDVIPDVGDVEEEMDEDESVSPTGTSSGRNVGYKGARVFDPDTGFYIDPVVVLD
FASLYPSIIQAHNLCFTTLTLNFETVKRLNPSDYATFTVGGKRLFFVRSNVRESLLGV
LLKDWLAMRKAIRARIPGSSSDEAVLLDKQQAAIKVVCNSVYGFTGVAQGFLPCLYVA
ATVTTIGRQMLLSTRDYIHNNWAAFERFITAFPDIESSVLSQKAYEVKVIYGDTDSVF
IRFKGVSVEGIAKIGEKMAHIISTALFCPPIKLECEKTFIKLLLITKKKYIGVIYGGK
VLMKGVDLVRKNNCQFINDYARKLVELLLYDDTVSRAAAEASCVSIAEWNRRAMPSGM
AGFGRIIADAHRQITSPKLDINKFVMTAELSRPPSAYINRRLAHLTVYYKLVMRQGQI
PNVRERIPYVIVAPTDEVEADAKSVALLRGDPLQNTAGKRCGEAKRKLIISDLAEDPI
HVTSHGLSLNIDYYFSHLIGTASVTFKALFGNDTKLTERLLKRFIPETRVVNVKMLNR
LQAAGFVCIHAPCWDNKMNTEAEITEEEQSHQIMRRVFCIPKAILHQS"
regulatory 47238..47243
/regulatory_class="polyA_signal_sequence"
/note="ORF27"
CDS 50857..54471
/note="ORF29;
orthologue of HHV-1 UL29"
/codon_start=1
/product="single-stranded DNA-binding protein"
/protein_id="CAA27912.1"
/db_xref="GOA:P09246"
/db_xref="InterPro:IPR000635"
/db_xref="UniProtKB/Swiss-Prot:P09246"
/translation="MENTQKTVTVPTGPLGYVYACRVEDLDLEEISFLAARSTDSDLA
LLPLMRNLTVEKTFTSSLAVVSGARTTGLAGAGITLKLTTSHFYPSVFVFHGGKHVLP
SSAAPNLTRACNAARERFGFSRCQGPPVDGAVETTGAEICTRLGLEPENTILYLVVTA
LFKEAVFMCNVFLHYGGLDIVHINHGDVIRIPLFPVQLFMPDVNRLVPDPFNTHHRSI
GEGFVYPTPFYNTGLCHLIHDCVIAPMAVALRVRNVTAVARGAAHLAFDENHEGAVLP
PDITYTYFQSSSSGTTTARGARRNDVNSTSKPSPSGGFERRLASIMAADTALHAEVIF

NTGIYEETPTDIKEWPMFIGMEGTLPRLNALGSYTARVAGVIGAMVFSPNSALYLTEV
EDSGMTEAKDGGPGPSFNRFYQFAGPHLAANPQTDRDGHVLSSQSTGSSNTEFSVDYL
ALICGFGAPLLARLLFYLERCDAGAFTGGHGDALKYVTGTFDSEIPCSLCEKHTRPVC
AHTTVHRLRQRMPRFGQATRQPIGVFGTMNSQYSDCDPLGNYAPYLILRKPGDQTEAA
KATMQDTYRATLERLFIDLEQERLLDRGAPCSSEGLSSVIVDHPTFRRILDTLRARIE
QTTTQFMKVLVETRDYKIREGLSEATHSMALTFDPYSGAFCPITNFLVKRTHLAVVQD
LALSQCHCVFYGQQVEGRNFRNQFQPVLRRRFVDLFNGGFISTRSITVTLSEGPVSAP
NPTLGQDAPAGRTFDGDLARVSVEVIRDIRVKNRVVFSGNCTNLSEAARARLVGLASA
YQRQEKRVDMLHGALGFLLKQFHGLLFPRGMPPNSKSPNPQWFWTLLQRNQMPADKLT
HEEITTIAAVKRFTEEYAAINFINLPPTCIGELAQFYMANLILKYCDHSQYLINTLTS
IITGARRPRDPSSVLHWIRKDVTSAADIETQAKALLEKTENLPELWTTAFTSTHLVRA
AMNQRPMVVLGISISKYHGAAGNNRVFQAGNWSGLNGGKNVCPLFTFDRTRRFIIACP
RGGFICPVTGPSSGNRETTLSDQVRGIIVSGGAMVQLAIYATVVRAVGARAQHMAFDD
WLSLTDDEFLARDLEELHDQIIQTLETPWTVEGALEAVKILDEKTTAGDGETPTNLAF
NFDSCEPSHDTTSNVLNISGSNISGSTVPGLKRPPEDDELFDLSGIPIKHGNITMEMI
"

regulatory 54518..54523
/regulatory_class="polyA_signal_sequence"
/note="ORF29"

CDS 54651..56963
/function="DNA packaging protein"
/note="ORF30;
orthologue of HHV-1 UL28"
/codon_start=1
/product="terminase subunit"
/protein_id="CAA27913.1"
/db_xref="GOA:P09284"
/db_xref="InterPro:IPR000501"
/db_xref="UniProtKB/Swiss-Prot:P09284"
/translation="MELDINRTLLVLLGQVYTYIFQVELLRRCDPRVACRFLYRLAAN
CLTVRYLLKLFLRGFNTQLKFGNTPTVCALHWALCYVKGEGERLFELLQHFKTRFVYG
ETKDSNCIKDYFVSAFNLKTCQYHHELSLTTYGGYVSSEIQFLHDIENFLKQLNYCYI
ITSSREALNTLETVTRFMTDTIGSGLIPPVELFDPAHPCAICFEELCITANQGETLHR
RLLGCICDHVTKQVRVNVDVDDIIRCLPYIPDVPDIKRQSAVEALRTLQTKTVVNPMG
AKNDTFDQTYEIASTMLDSYNVFKPAPRCMYAISELKFWLTSNSTEGPQRTLDVFVDN
LDVLNEHEKHAELTAVTVELALFGKTPIHFDRAFSEELGSLDAIDSILVGNRSSSPDS
QIEALIKACYAHHLSSPLMRHISNPSHDNEAALRQLLERVGCEDDLTKEASDSATASE
CDLNDDSSITFAVHGWENLLSKAKIDAAERKRVYLEHLSKRSLTSLGRCIREQRQELE
KTLRVNVYGEALLQTFVSMQNGFGARNVFLAKVSQAGCIIDNRIQEAAFDAHRFIRNT
LVRHTVDAAMLPALTHKFFELVNGPLFNHDEHRFAQPPNTALFFTVENVGLFPHLKEE
LAKFMGGVVGSNWLLSPFRGFYCFSGVEGVTFAQRLAWKYIRELVFATTLFTSVFHCG
EVRLCRVDRLGKDPRGCTSQPKGIGSSHGPLDGIYLTYEETCPLVAIIQSGETGIDQN
TVVIYDSDVFSLLYTLMQRLAPDSTDPAFS"

CDS 57008..59614

/note="ORF31;
orthologue of HHV-1 UL27"
/codon_start=1
/product="envelope glycoprotein gB"
/protein_id="CAA27914.1"
/db_xref="GOA:P09257"
/db_xref="InterPro:IPR000234"
/db_xref="UniProtKB/Swiss-Prot:P09257"
/translation="MFVTAVVSVSPSSFYESLQVEPTQSEDITRSAHLGDGDEIREAI
HKSQDAETKPTFYVCPPPTGSTIVRLEPTRTCPDYHLGKNFTEGIAVVYKENIAAYKF
KATVYYKDVIVSTAWAGSSYTQITNRYADRVPIPVSEITDTIDKFGKCSSKATYVRNN
HKVEAFNEDKNPQDMPLIASKYNSVGSKAWHTTNDTYMVAGTPGTYRTGTSVNCIIEE
VEARSIFPYDSFGLSTGDIIYMSPFFGLRDGAYREHSNYAMDRFHQFEGYRQRDLDTR
ALLEPAARNFLVTPHLTVGWNWKPKRTEVCSLVKWREVEDVVRDEYAHNFRFTMKTLS
TTFISETNEFNLNQIHLSQCVKEEARAIINRIYTTRYNSSHVRTGDIQTYLARGGFVV
VFQPLLSNSLARLYLQELVRENTNHSPQKHPTRNTRSRRSVPVELRANRTITTTSSVE
FAMLQFTYDHIQEHVNEMLARISSSWCQLQNRERALWSGLFPINPSALASTILDQRVK
ARILGDVISVSNCPELGSDTRIILQNSMRVSGSTTRCYSRPLISIVSLNGSGTVEGQL
GTDNELIMSRDLLEPCVANHKRYFLFGHHYVYYEDYRYVREIAVHDVGMISTYVDLNL
TLLKDREFMPLQVYTRDELRDTGLLDYSEIQRRNQMHSLRFYDIDKVVQYDSGTAIMQ
GMAQFFQGLGTAGQAVGHVVLGATGALLSTVHGFTTFLSNPFGALAVGLLVLAGLVAA
FFAYRYVLKLKTSPMKALYPLTTKGLKQLPEGMDPFAEKPNATDTPIEEIGDSQNTEP
SVNSGFDPDKFREAQEMIKYMTLVSAAERQESKARKKNKTSALLTSRLTGLALRNRRG
YSRVRTENVTGV"
regulatory 59643..59648
/regulatory_class="polyA_signal_sequence"
/note="ORF31"
CDS 59766..60197
/note="unnamed protein product; ORF32"
/codon_start=1
/protein_id="CAA27915.1"
/db_xref="UniProtKB/Swiss-Prot:P09285"
/translation="MESSNINALQQPSSIAHHPSKQCASSLNETVKDSPPAIYEDRLE
HTPVQLPRDGTPRDVCSVGQLTCRACATKPFRLNRDSQYDYLNTCPGGRHISLALEII
TGRWVCIPRVFPDTPEEKWMAPYIIPDREQPSSGDEDSDTD"
regulatory 60208..60213
/regulatory_class="polyA_signal_sequence"
/note="ORF32"
regulatory complement(60309..60314)
/regulatory_class="polyA_signal_sequence"
CDS complement(60321..62138)
/function="role in capsid maturation; cleaved C-terminal
domain is minor capsid scaffold protein"
/note="ORF33;

orthologue of HHV-1 UL26"
/codon_start=1
/product="protease"
/protein_id="CAA27916.1"
/db_xref="GOA:P09286"
/db_xref="InterPro:IPR001847"
/db_xref="PDB:1VZV"
/db_xref="UniProtKB/Swiss-Prot:P09286"
/translation="MAAEADEENCEALYVAGYLALYSKDEGELNITPEIVRSALPPTS
KIPINIDHRKDCVVGEVIAIIEDIRGPFFLGIVRCPQLHAVLFEAAHSNFFGNRDSVL
SPLERALYLVTNYLPSVSLSSKRLSPNEIPDGNFFTHVALCVVGRRVGTVVNYDCTPE
SSIEPFRVLSMESKARLLSLVKDYAGLNKVWKVSEDKLAKVLLSTAVNNMLLRDRWDV
VAKRRREAGIMGHVYLQASTGYGLARITNVNGVESKLPNAGVINATFHPGGPIYDLAL
GVGESNEDCEKTVPHLKVTQLCRNDSDMASVAGNASNISPQPPSGVPTGGEFVLIPTA
YYSQLLTGQTKNPQVSIGAPNNGQYIVGPYGSPHPPAFPPNTGGYGCPPGHFGGPYGF
PGYPPPNRLEMQMSAFMNALAAERGIDLQTPCVNFPDKTDVRRPGKRDFKSMDQRELD
SFYSGESQMDGEFPSNIYFPGEPTYITHRRRRVSPSYWQRRHRVSNGQHEELAGVVAK
LQQEVTELKSQNGTQMPLSHHTNIPEGTRDPRISILLKQLQSVSGLCSSQNTTSTPHT
DTVGQDVNAVEASSKAPLIQGSTADDADMFANQMMVGRC"
CDS complement(60321..61229)
/note="ORF33.5;
orthologue of HHV-1 UL26.5"
/codon_start=1
/product="major capsid scaffold protein"
/protein_id="CAH19069.1"
/db_xref="GOA:P09286"
/db_xref="InterPro:IPR001847"
/db_xref="PDB:1VZV"
/db_xref="UniProtKB/Swiss-Prot:P09286"
/translation="MASVAGNASNISPQPPSGVPTGGEFVLIPTAYYSQLLTGQTKNP
QVSIGAPNNGQYIVGPYGSPHPPAFPPNTGGYGCPPGHFGGPYGFPGYPPPNRLEMQM
SAFMNALAAERGIDLQTPCVNFPDKTDVRRPGKRDFKSMDQRELDSFYSGESQMDGEF
PSNIYFPGEPTYITHRRRRVSPSYWQRRHRVSNGQHEELAGVVAKLQQEVTELKSQNG
TQMPLSHHTNIPEGTRDPRISILLKQLQSVSGLCSSQNTTSTPHTDTVGQDVNAVEAS
SKAPLIQGSTADDADMFANQMMVGRC"
CDS complement(62171..63910)
/function="DNA packaging protein"
/note="unnamed protein product; ORF34;
orthologue of HHV-1 UL25"
/codon_start=1
/protein_id="CAA27917.1"
/db_xref="GOA:P09287"
/db_xref="InterPro:IPR002493"
/db_xref="UniProtKB/Swiss-Prot:P09287"

/translation="MTARYGFGSISFPNKCGIFLSTTKNFIAPNFPIHYWTAPAFELR
GRMNPDLEKNTLTLKNAAAVAALDNLRGETITLPTEIDRRLKPLEEQLTRMAKVLDSL
ETAAAEAEEADAQSEECTRTEIIRNESIHPEVQIAKNDAPLQYDTNFQVDFITLVYLG
RARGNNSPGIVFGPWYRTLQERLVLDRPVAARGVDCKDGRISRTFMNTTVTCLQSAGR
MYVGDRAYSAFECAVLCLYLMYRTSNSVHEPQVSSFGNLIEHLPEYTETFVNYMTTHE
NKNSYQFCYDRLPRDQFHARGGRYDQGALTSHSVMDALIRLQVLPPAPGQFNPGVNDI
IDRNHTAYVDKIQQAAAAYLERAQNVFLMEDQTLLRLTIDTITALLLLRRLLWNGNVY
GDKLKNNFQLGLIVSEATGTPTNNVILRGATGFDGKFKSGNNNFQFLCERYIAPLYTL
NRTTELTEMFPGLVALCLDAHTQLSRGSLGRTVIDISSGQYQDRLISLIALELEHRRQ
NVTSLPIAAVVSIHDSVMLQYERGLGMLMHQPRVRAALEESRRLAQFNVNSDYDLLYF
VCLGVIPQFASTP"

CDS complement(63977..64753)
/function="nuclear protein"
/note="unnamed protein product; ORF35;
orthologue of HHV-1 UL24"
/codon_start=1
/protein_id="CAA27918.1"
/db_xref="GOA:P09288"
/db_xref="InterPro:IPR002580"
/db_xref="UniProtKB/Swiss-Prot:P09288"
/translation="MSASRIRAKCFRLGQRCHTRFYDVLKKDIDNVRRGFADAFNPRL
AKLLSPLSHVDVQRAVRISMSFEVNLGRRRPDCVCIIQTESSGAGKTVCFIVELKSCR
FSANIHTPTKYHQFCEGMRQLRDTMALIKETTPTGSDEIMVTPLLVFVSQRGLNLLQV
TRLPPKVIHGNLVMLASHLENVAEYTPPIRSVRERRRLCKKKIHVCSLAKKRAKSCHR
SALTKFEENAACGVDLPLRRPSLGACGGILQSITGMFSHG"

regulatory 64364..64370
/regulatory_class="TATA_box"
/note="ORF36"

5'UTR 64385..64389
/note="ORF36"

CDS 64807..65832
/note="ORF36;
orthologue of HHV-1 UL23"
/codon_start=1
/product="deoxypyrimidine kinase"
/protein_id="CAA27919.1"
/db_xref="GOA:P09250"
/db_xref="InterPro:IPR001889"
/db_xref="UniProtKB/Swiss-Prot:P09250"
/translation="MSTDKTDVKMGVLRIYLDGAYGIGKTTAAEEFLHHFAITPNRIL
LIGEPLSYWRNLAGEDAICGIYGTQTRRLNGDVSPEDAQRLTAHFQSLFCSPHAIMHA
KISALMDTSTSDLVQVNKEPYKIMLSDRHPIASTICFPLSRYLVGDMSPAALPGLLFT
LPAEPPGTNLVVCTVSLPSHLSRVSKRARPGETVNLPFVMVLRNVYIMLINTIIFLKT
NNWHAGWNTLSFCNDVFKQKLQKSECIKLREVPGIEDTLFAVLKLPELCGEFGNILPL

WAWGMETLSNCSRSMSPFVLSLEQTPQHAAQELKTLLPQMTPANMSSGAWNILKELVN
AVQDNTS"

regulatory 65859..65864
/regulatory_class="polyA_signal_sequence"
/note="ORF36"

3'UTR 65881..65885
/note="ORF36"

CDS 66074..68599
/function="complexes with gL; role in cell entry"
/note="ORF37;
orthologue of HHV-1 UL22"
/codon_start=1
/product="envelope glycoprotein gH"
/protein_id="CAA27920.1"
/db_xref="GOA:P09260"
/db_xref="InterPro:IPR003493"
/db_xref="UniProtKB/Swiss-Prot:P09260"
/translation="MFALVLAVVILPLWTTANKSYVTPTPATRSIGHMSALLREYSDR
NMSLKLEAFYPTGFDEELIKSLHWGNDRKHVFLVIVKVNPTTHEGDVGLVIFPKYLLS
PYHFKAEHRAPFPAGRFGFLSHPVTPDVSFFDSSFAPYLTTQHLVAFTTFPPNPLVWH
LERAETAATAERPFGVSLLPARPTVPKNTILEHKAHFATWDALARHTFFSAEAIITNS
TLRIHVPLFGSVWPIRYWATGSVLLTSDSGRVEVNIGVGFMSSLISLSSGPPIELIVV
PHTVKLNAVTSDTTWFQLNPPGPDPGPSYRVYLLGRGLDMNFSKHATVDICAYPEESL
DYRYHLSMAHTEALRMTTKADQHDINEESYYHIAARIATSIFALSEMGRTTEYFLLDE
IVDVQYQLKFLNYILMRIGAGAHPNTISGTSDLIFADPSQLHDELSLLFGQVKPANVD
YFISYDEARDQLKTAYALSRGQDHVNALSLARRVIMSIYKGLLVKQNLNATERQALFF
ASMILLNFREGLENSSRVLDGRTTLLLMTSMCTAAHATQAALNIQEGLAYLNPSKHMF
TIPNVYSPCMGSLRTDLTEEIHVMNLLSAIPTRPGLNEVLHTQLDESEIFDAAFKTMM
IFTTWTAKDLHILHTHVPEVFTCQDAAARNGEYVLILPAVQGHSYVITRNKPQRGLVY
SLADVDVYNPISVVYLSRDTCVSEHGVIETVALPHPDNLKECLYCGSVFLRYLTTGAI
MDIIIIDSKDTERQLAAMGNSTIPPFNPDMHGDDSKAVLLFPNGTVVTLLGFERRQAI
RMSGQYLGASLGGAFLAVVGFGIIGWMLCGNSRLREYNKIPLT"

regulatory 68611..68616
/regulatory_class="polyA_signal_sequence"
/note="ORF37"

regulatory complement(68647..68652)
/regulatory_class="polyA_signal_sequence"
/note="ORF38"

CDS complement(68668..70293)
/function="tegument protein"
/note="unnamed protein product; ORF38;
orthologue of HHV-1 UL21"
/codon_start=1
/protein_id="CAA27921.1"

/db_xref="GOA:P09289"
/db_xref="InterPro:IPR004936"
/db_xref="UniProtKB/Swiss-Prot:P09289"
/translation="MEFPYHSTVSYNGVTFYFNERATRAYFICGGCLISIPRKHGGEI
AKFGHVVRGVGPGDRSVASYVRSELNRTGKTWAVSSNNNCVFLDRVALLAAGSGAVDR
DLCGTFDVEVEDPTLADYLVSLPVTHLTLVAGVDVTRENKLKLFPTPTAINTTNGFMY
VPNEASFSLVYMRMLELPESLQELVSGLFDGTPEIRDALNGSNDDEKTSIIVSRRAAD
VVTEDVKADDVPISGEPYSEKQPRRRKKSDHITLSNFVQIRTIPRVMDIWDPRHKATT
HCIRALSCAVFFADEVIFKARKWPGLEDELNEARETIYTAVVAVYGERGELPFFGHAY
GRDLTSCQRFVIVQYILSRWEAFNCYAVIEDLTRSYVNALPSDDDTDQVAQDLIRTIV
DTANSLLREVGFIGTLAETLLFLPLPQLPCYKETSHLAKKEGVRILRLAKTGVGLSDT
VPVDVSVTERHEYEISRYLDTLYSGDPCYNGAVRLCRLLGSSIPIALYYNTISGNAFE
PYFAGRRYIAYLGALFFGRVHQTPFGDGKKTQR"
CDS 70633..71355
/function="integral membrane protein; role in virion
egress"
/note="unnamed protein product; ORF39;
orthologue of HHV-1 UL20"
/codon_start=1
/protein_id="CAA27922.1"
/db_xref="GOA:P09290"
/db_xref="InterPro:IPR007629"
/db_xref="UniProtKB/Swiss-Prot:P09290"
/translation="MNPPQARVSEQTKDLLSVMVNQHPEEDAKVCKSSDNSPLYNTMV
MLSYGGDTDLLLSSACTRTSTVNRSAFTQHSVFYIISTVLIQPICCIFFFFYYKATRC
MLLFTAGLLLTILHHFRLIIMLLCVYRNIRSDLLPLSTSQQLLLGIIVVTRTMLFCIT
AYYTLFIDTRVFFLITGHLQSEVIFPDSVSKILPVSWGPSPAVLLVMAAVIYAMDCLV
DTVSFIGPRVWVRVMLKTSISF"
regulatory 71364..71369
/regulatory_class="polyA_signal_sequence"
/note="ORF39"
CDS 71540..75730
/function="component of hexons and pentons"
/note="ORF40;
orthologue of HHV-1 UL19"
/codon_start=1
/product="major capsid protein"
/protein_id="CAA27923.1"
/db_xref="GOA:P09245"
/db_xref="InterPro:IPR000912"
/db_xref="UniProtKB/Swiss-Prot:P09245"
/translation="MTTVSCPANVITTTESDRIAGLFNIPAGIIPTGNVLSTIEVCAH
RCIFDFFKQIRSDDNSLYSAQFDILLGTYCNTLNFVRFLELGLSVACICTKFPELAYV
RDGVIQFEVQQPMIARDGPHPVDQPVHNYMVKRIHKRSLSAAFAIASEALSLLSNTYV

DGTEIDSSLRIRAIQQMARNLRTVLDSFERGTADQLLGVLLEKAPPLSLLSPINKFQP
EGHLNRVARAALLSDLKRRVCADMFFMTRHAREPRLISAYLSDMVSCTQPSVMVSRIT
HTNTRGRQVDGVLVTTATLKRQLLQGILQIDDTAADVPVTYGEMVLQGTNLVTALVMG
KAVRGMDDVARHLLDITDPNTLNIPSIPPQSNSDSTTAGLPVNARVPADLVIVGDKLV
FLEALERRVYQATRVAYPLIGNIDITFIMPMGVFQANSMDRYTRHAGDFSTVSEQDPR
QFPPQGIFFYNKDGILTQLTLRDAMGTICHSSLLDVEATLVALRQQHLDRQCYFGVYV
AEGTEDTLDVQMGRFMETWADMMPHHPHWVNEHLTILQFIAPSNPRLRFELNPAFDFF
VAPGDVDLPGPQRPPEAMPTVNATLRIINGNIPVPLCPISFRDCRGTQLGLGRHTMTP
ATIKAVKDTFEDRAYPTIFYMLEAVIHGNERNFCALLRLLTQCIRGYWEQSHRVAFVN
NFHMLMYITTYLGNGELPEVCINIYRDLLQHVRALRQTITDFTIQGEGHNGETSEALN
NILTDDTFIAPILWDCDALIYRDEAARDRLPAIRVSGRNGYQALHFVDMAGHNFQRRD
NVLIHGRPVRGDTGQGIPITPHHDREWGILSKIYYYIVIPAFSRGSCCTMGVRYDRLY
PALQAVIVPEIPADEEAPTTPEDPRHPLHAHQLVPNSLNVYFHNAHLTVDGDALLTLQ
ELMGDMAERTTAILVSSAPDAGAATATTRNMRIYDGALYHGLIMMAYQAYDETIATGT
FFYPVPVNPLFACPEHLASLRGMTNARRVLAKMVPPIPPFLGANHHATIRQPVAYHVT
HSKSDFNTLTYSLLGGYFKFTPISLTHQLRTGFHPGIAFTVVRQDRFATEQLLYAERA
SESYFVGQIQVHHHDAIGGVNFTLTQPRAHVDLGVGYTAVCATAALRCPLTDMGNTAQ
NLFFSRGGVPMLHDNVTESLRRITASGGRLNPTEPLPIFGGLRPATSAGIARGQASVC
EFVAMPVSTDLQYFRTACNPRGRASGMLYMGDRDADIEAIMFDHTQSDVAYTDRATLN
PWASQKHSYGDRLYNGTYNLTGASPIYSPCFKFFTPAEVNTNCNTLDRLLMEAKAVAS
QSSTDTEYQFKRPPGSTEMTQDPCGLFQEAYPPLCSSDAAMLRTAHAGETGADEVHLA
QYLIRDASPLRGCLPLPR"

regulatory 75758..75763
/regulatory_class="polyA_signal_sequence"
/note="ORF40"

CDS 75847..76797
/function="component of intercapsomeric triplex"
/note="ORF41;
orthologue of HHV-1 UL18"
/codon_start=1
/product="minor capsid protein"
/protein_id="CAA27924.1"
/db_xref="GOA:P09291"
/db_xref="InterPro:IPR002690"
/db_xref="UniProtKB/Swiss-Prot:P09291"
/translation="MAMPFEIEVLLPGELSPAETSALQKCEGKIITFSTLRHRASLVD
IALSSYYINGAPPDTLSLLEAYRMRFAAVITRVIPGKLLAHAIGVGTPTPGLFIQNTS
PVDLCNGDYICLLPPVFGSADSIRLDSVGLEIVFPLTIPQTLMREIIAKVVARAVERT
AAGAQILPHEVLRGADVICYNGRRYELETNLQHRDGSDAAIRTLVLNLMFSINEGCLL
LLALIPTLLVQGAHDGYVNLLIQTANCVRETGQLINIPPMPRIQDGHRRFPIYETISS
WISTSSRLGDTLGTRAILRVCVFDGPSTVHPGDRTAVIQV"

regulatory 76807..76812
/regulatory_class="polyA_signal_sequence"
/note="ORF41"

```
regulatory      complement(76850..76855)
                /regulatory_class="polyA_signal_sequence"
                /note="ORF42;
                ORF45"
CDS             complement(join(76851..78038,81538..82593))
                /function="DNA packaging protein"
                /note="ORF45;
                orthologue of HHV-1 UL15"
                /codon_start=1
                /product="putative ATPase subunit of terminase"
                /protein_id="CAB55553.1"
                /db_xref="GOA:P09294"
                /db_xref="InterPro:IPR003498"
                /db_xref="InterPro:IPR003499"
                /db_xref="UniProtKB/Swiss-Prot:P09294"
                /translation="MSLIMFGRTLGEESVRYFERLKRRRDERFGTLESPTPCSTRQGS
                LGNATQIPFLNFAIDVTRRHQAVIPGIGTLHNCCEYIPLFSATARRAMFGAFLSSTGY
                NCTPNVVLKPWRYSVNANVSPELKKAVSSVQFYEYSPEEAAPHRNAYSGVMNTFRAFS
                LSDSFCQLSTFTQRFSYLVETSFESIEECGSHGKRAKVDVPIYGRYKGTLELFQKMIL
                MHTTHFISSVLLGDHADRVDCFLRTVFNTPSVSDSVLEHFKQKSTVFLVPRRHGKTWF
                LVPLIALVMATFRGIKVGYTAHIRKATEPVFEGIKSRLEQWFGANYVDHVKGESITFS
                FTDGSYSTAVFASSHNTNGIRGQDFNLLFVDEANFIRPDAVQTIVGFLNQTNCKIIFV
                SSTNTGKASTSFLYNLRGSSDQLLNVVTYVCDDHMPRVLAHSDVTACSCYVLNKPVFI
                TMDGAMRRTADLFMADSFVQEIVGGRKQNSGGVGFDRPLFTKTARERFILYRPSTVAN
                CAILSSVLYVYVDPAFTSNTRASGTGVAIVGRYKSDWIIFGLEHFFLRALTGTSSSEI
                GRCVTQCLGHILALHPNTFTNVHVSIEGNSSQDSAVAISLAIAQQFAVLEKGNVLSSA
                PVLLFYHSIPPGCSVAYPFFLLQKQKTPAVDYFVKRFNSGNIIASQELVSLTVKLGVD
                PVEYLCKQLDNLTEVIKGGMGNLDTKTYTGKGTTGTMSDDLMVALIMSVYIGSSCIPD
                SVFMPIK"
CDS             78170..80200
                /function="DNA packaging protein"
                /function="tegument protein"
                /note="unnamed protein product; ORF43;
                orthologue of HHV-1 UL17"
                /codon_start=1
                /protein_id="CAA27926.1"
                /db_xref="GOA:P09292"
                /db_xref="InterPro:IPR007640"
                /db_xref="UniProtKB/Swiss-Prot:P09292"
                /translation="MEAHLANETKHALWHNDHTKGLLHVVIPNAGLIAAGIDPALLIL
                KKPGQRFKVEVQTRYHATGQCEPWCQVFAAYIPDNALTNLLIPKTEPFVSHVFSATHN
                SGGLILSLPVYLSPGLFFDAFNVVAIRINTGNRKHRDICIMYAELIPNGTRYFADGQR
                VLLLCKQLIAYIRCTPRLASSIKIYAEHMVAAMGESHTSNGDNIGPVSSIIDLDRQLT
                SGGIDDSPAETRIQENNRDVLELIKRAVNIVNSRHPVRPSSSRVASGLLQSAKGHGAQ
```

TSNTDPINNGSFDGVLEPPGQGRFTGKKNNSSASIPPLQDVLLFTPASTEPQSLMEWF
DICYAQLVSGDTPADFWKRRPLSIVPRHYAESPSPLIVVSYNGSSAWGGRITGSPILY
HSAQAIIDAACINARVDNPQSLHVTARQELVARLPFLANVLNNQTPLPAFKPGAEMFL
NQVFKQACVTSLTQGLITELQTNPTLQQLMEYDIADSSQTVIDEIVARTPDLIQTIVS
VLTEMSMDAFYNSSLMYAVLAYLSSVYTRPQGGGYIPYLHASFPCWLGNRSIYLFDYY
NSGGEILKLSKVPVPVALEKVGIGNSTQLRGKFIRSADIVDIGICSKYLPGQCYAYIC
LGFNQQLQSILVLPGGFAACFCITDTLQAALPASLIGPILDRFCFSIPNPHK"

regulatory 80196..80201
/regulatory_class="polyA_signal_sequence"

CDS 80360..81451
/function="tegument protein"
/note="unnamed protein product; ORF44;
orthologue of HHV-1 UL16"
/codon_start=1
/protein_id="CAA27927.1"
/db_xref="GOA:P09293"
/db_xref="InterPro:IPR004286"
/db_xref="UniProtKB/Swiss-Prot:P09293"
/translation="MELQRIFPLYTATGAARKLTPEAVQRLCDALTLDMGLWKSILTD
PRVKIMRSTAFITLRIAPFIPLQTDTTNIAVVVATIYITRPRQMNLPPKTFHVIVNFN
YEVSYAMTATLRIYPVENIDHVFGATFKNPIAYPLPTSIPDPRADPTPADLTPTPNLS
NYLQPPRLPKNPYACKVISPGVWWSDERRRLYVLAMEPNLIGLCPAGWHARILGSVLN
RLLSHADGCDECNHRVHVGALYALPHVTNHAEGCVCWAPCMWRKAGQRELKVEVDIGA
TQVLFVDVTTCIRITSTKNPRITANLGDVIAGTNASGLSVPVNSSGWQLYMFGETLSR
AIINGCGLLQRICFPETQRLSGEPEPTTT"

regulatory 81509..81514
/regulatory_class="polyA_signal_sequence"
/note="ORF44"

CDS 82719..83318
/function="tegument protein"
/note="unnamed protein product; ORF46;
orthologue of HHV-1 UL14"
/codon_start=1
/protein_id="CAA27929.1"
/db_xref="GOA:P09295"
/db_xref="InterPro:IPR005207"
/db_xref="UniProtKB/Swiss-Prot:P09295"
/translation="MSGHTPTYASHRRNRVKLVEAHNRAGLFKERTLDLIRGGASVQD
PAFVYAFTAAKEACADLNNQLRSAARIASVEQKIRDIQSKVEEQTSIQQILNTNRRYI
APDFIRGLDKTEDDNTDNIDRLEDAVGPNIEHENHTWFGEDDEALLTQWMLTTHPPTS
KYLQLQDLCVPTTIPTDMNQMQPQPISKNENPPTPHTDV"

CDS 83168..84700
/function="tegument protein"
/note="ORF47;

orthologue of HHV-1 UL13"
/codon_start=1
/product="serine-threonine protein kinase"
/protein_id="CAA27930.1"
/db_xref="GOA:P09296"
/db_xref="InterPro:IPR000719"
/db_xref="InterPro:IPR008271"
/db_xref="InterPro:IPR011009"
/db_xref="InterPro:IPR017442"
/db_xref="UniProtKB/Swiss-Prot:P09296"
/translation="MDADDTPPNLQISPTAGPLRSHHNTDGHEPNATAADQQERESTN
PTHGCVNHPWANPSTATCMESPERSQQTSLFLLKHGLTRDPIHQRERVDVFPQFNKPP
WVFRISKLSRLIVPIFTLNEQLCFSKLQIRDRPRFAGRGTYGRVHIYPSSKIAVKTMD
SRVFNRELINAILASEGSIRAGERLGISSIVCLLGFSLQTKQLLFPAYDMDMDEYIVR
LSRRLTIPDHIDRKIAHVFLDLAQALTFLNRTCGLTHLDVKCGNIFLNVDNFASLEIT
TAVIGDYSLVTLNTYSLCTRAIFEVGNPSHPEHVLRVPRDASQMSFRLVLSHGTNQPP
EILLDYINGTGLTKYTGTLPQRVGLAIDLYALGQALLEVILLGRLPGQLPISVHRTPH
YHYYGHKLSPDLALDTLAYRCVLAPYILPSDIPGDLNYNPFIHAGELNTRISRNSLRR
IFQCHAVRYGVTHSKLFEGIRIPASLYPATVVTSLLCHDNSEIRSDHPLLWHDRDWIG
ST"
CDS 84667..86322
/function="role in maturation of DNA"
/note="ORF48;
orthologue of HHV-1 UL12"
/codon_start=1
/product="deoxyribonuclease"
/protein_id="CAA27931.1"
/db_xref="GOA:P09253"
/db_xref="InterPro:IPR001616"
/db_xref="InterPro:IPR011335"
/db_xref="UniProtKB/Swiss-Prot:P09253"
/translation="MARSGLDRIDISPQPAKKIARVGGLQHPFVKTDINTINVEHHFI
DTLQKTSPNMDCRGMTAGIFIRLSHMYKILTTLESPNDVTYTTPGSTNALFFKTSTQP
QEPRPEELASKLTQDDIKRILLTIESETRGQGDNAIWTLLRRNLITASTLKWSVSGPV
IPPQWFYHHNTTDTYGDAAAMAFGKTNEPAARAIVEALFIDPADIRTPDHLTPEATTK
FFNFDMLNTKSPSLLVGTPRIGTYECGLLIDVRTGLIGASLDVLVCDRDPLTGTLNPH
PAETDISFFEIKCRAKYLFDPDDKNNPLGRTYTTLINRPTMANLRDFLYTIKNPCVSF
FGPSANPSTREALITDHVEWKRLGFKGGRALTELDAHHLGLNRTISSRVWVFNDPDIQ
KGTITTIAWATGDTALQIPVFANPRHANFKQIAVQTYVLSGYFPALKLRPFLVTFIGR
VRRPHEVGVPLRVDTQAAAIYEYNWPTIPPHCAVPVIAVLTPIEVDVPRVTQILKDTG
NNAITSALRSLRWDNLHPAVEEESVDCANGTTSLLRATEKPLL"
CDS 86226..86471
/function="role in virion envelopment"
/note="anchored in envelope;

ORF49;
orthologue of HHV-1 UL11"
/codon_start=1
/product="myristylated tegument protein"
/protein_id="CAA27932.1"
/db_xref="GOA:P09297"
/db_xref="InterPro:IPR020192"
/db_xref="UniProtKB/Swiss-Prot:P09297"
/translation="MGQSSSSGRGGICGLCKRYNELVTCNGETVALNSEFFEDFDFDE
NVTEDADKSTQRRPRVIDVTPKRKPSGKSSHSKCAKC"

regulatory 86499..86504
/regulatory_class="polyA_signal_sequence"
/note="ORF49"

regulatory complement(86541..86546)
/regulatory_class="polyA_signal_sequence"
/note="ORF50"

CDS complement(86575..87882)
/function="disulphide-linked to gN"
/note="ORF50;
orthologue of HHV-1 UL10"
/codon_start=1
/product="envelope glycoprotein gM"
/protein_id="CAA27934.1"
/db_xref="GOA:P09298"
/db_xref="InterPro:IPR000785"
/db_xref="UniProtKB/Swiss-Prot:P09298"
/translation="MGTQKKGPRSEKVSPYDTTTPEVEALDHQMDTLNWRIWIIQVMM
FTLGAVMLLATLIAASSEYTGIPCFYAAVVDYELFNATLDGGVWSGNRGGYSAPVLFL
EPHSVVAFTYYTALTAMAMAVYTLITAAIIHRETKNQRVRQSSGVAWLVVDPTTLFWG
LLSLWLLNAVVLLLAYKQIGVAATLYLGHFATSVIFTTYFCGRGKLDETNIKAVANLR
QQSVFLYRLAGPTRAVFVNLMAALMAICILFVSLMLELVVANHLHTGLWSSVSVAMST
FSTLSVVYLIVSELILAHYIHVLIGPSLGTLVACATLGTAAHSYMDRLYDPISVQSPR
LIPTTRGTLACLAVFSVVMLLLRLMRAYVYHRQKRSRFYGAVRRVPERVRGYIRKVKP
AHRNSRRTNYPSQGYGYVYENDSTYETDREDELLYERSNSGWE"

CDS 87881..90388
/function="origin-binding protein"
/note="ORF51;
orthologue of HHV-1 UL9"
/codon_start=1
/product="helicase"
/protein_id="CAA27933.1"
/db_xref="GOA:P09299"
/db_xref="InterPro:IPR003450"
/db_xref="InterPro:IPR003593"

/db_xref="InterPro:IPR014001"
/db_xref="InterPro:IPR014021"
/db_xref="UniProtKB/Swiss-Prot:P09299"
/translation="MSPNTGESNAAVYASSTQLARALYGGDLVSWIKHTHPGISLELQ
LDVPVKLIKPGMSQTRPVTVVRAPMGSGKTTALLEWLQHALKADISVLVVSCRRSFTQ
TLIQRFNDAGLSGFVTYLTSETYIMGFKRLIVQLESLHRVSSEAIDSYDVLILDEVMS
VIGQLYSPTMRRLSAVDSLLYRLLNRCSQIIAMDATVNSQFIDLISGLRGDENIHTIV
CTYAGVGFSGRTCTILRDMGIDTLVRVIKRSPEHEDVRTIHQLRGTFFDELALRLQCG
HNICIFSSTLSFSELVAQFCAIFTDSILILNSTRPLCNVNEWKHFRVLVYTTVVTVGL
SFDMAHFHSMFAYIKPMSYGPDMVSVYQSLGRVRLLLLNEVLMYVDGSRTRCGPLFSP
MLLNFTIANKFQWFPTHTQITNKLCCAFRQRCANAFTRSNTHLFSRFKYKHLFERCSL
WSLADSINILQTLLASNQILVVLDGMGPITDVSPVQFCAFIHDLRHSANAVASCMRSL
RQDNDSCLTDFGPSGFMADNITAFMEKYLMESINTEEQIKVFKALACPIEQPRLVNTA
ILGACIRIPEALEAFDVFQKIYTHYASGWFPVLDKTGEFSIATITTAPNLTTHWELFR
RCAYIAKTLKWNPSTEGCVTQVLDTDINTLFNQHGDSLAQLIFEVMRCNVTDAKIILN
RPVWRTTGFLDGCHNQCFRPIPTKHEYNIALFRLIWEQLFGARVTKSTQTFPGSTRVK
NLKKKDLETLLDSINVDRSACRTYRQLYNLLMSQRHSFSQQRYKITAPAWARHVYFQA
HQMHLAPHAEAMLQLALSELSPGSWPRINGAVNFESL"

CDS 90493..92808
/function="component of helicase-primase complex"
/note="unnamed protein product; ORF52;
orthologue of HHV-1 UL8"
/codon_start=1
/protein_id="CAA27935.1"
/db_xref="GOA:P09300"
/db_xref="InterPro:IPR004996"
/db_xref="UniProtKB/Swiss-Prot:P09300"
/translation="MDATQITLVRESGHICAASIYTSWTQSGQLTQNGLSVLYYLLCK
NSCGKYVPKFAEITVQQEDLCRYSRHGGSVSAATFASICRAASSAALDAWPLEPLGNA
DTWRCLHGTALATLRRVLGFKSFYSPVTFETDTNTGLLLKTIPDEHALNNDNTPSTGV
LRANFPVAIDVSAVSACNAHTQGTSLAYARLTALKSNGDTQQQTPLDVEVITPKAYIR
RKYKSTFSPPIEREGQTSDLFNLEERRLVLSGNRAIVVRVLLPCYFDCLTTDSTVTSS
LSILATYRLWYAAAFGKPGVVRPIFAYLGPELNPKGEDRDYFCTVGFPGWTTLRTQTP
AVESIRTATEMYMETDGLWPVTGIQAFHYLAPWGQHPPLPPRVQDLIGQIPQDTGHAD
ATVNWDAGRISTVFKQPVQLQDRWMAKFDFSAFFPTIYCAMFPMHFRLGKIVLARMRR
GMGCLKPALVSFFGGLRHILPSIYKAIIFIANEISLCVEQTALEQGFAICTYIKDGFW
GIFTDLHTRNVCSDQARCSALNLAATCERAVTGLLRIQLGLNFTPAMEPVLRVEGVYT
HAFTWCTTGSWLWNLQTNTPPDLVGVPWRSQAARDLKERLSGLLCTATKIRERIQENC
IWDHVLYDIWAGQVVEAARKTYVDFFEHVFDRRYTPVYWSLQEQNSETKAIPASYLTY
GHMQDKDYKPRQIIMVRNPNPHGPPTVVYWELLPSCACIPPIDCAAHLKPLIHTFVTI
INHLLDAHNDFSSPSLKFTDDPLASYNFLFL"

regulatory 92841..92846
/regulatory_class="polyA_signal_sequence"
/note="ORF52"

```
regulatory      complement(92850..92855)
                /regulatory_class="polyA_signal_sequence"
                /note="ORF53"
CDS             complement(92855..93850)
                /function="tegument protein"
                /note="unnamed protein product; ORF53;
                orthologue of HHV-1 UL7"
                /codon_start=1
                /protein_id="CAA27936.1"
                /db_xref="InterPro:IPR002600"
                /db_xref="UniProtKB/Swiss-Prot:P09301"
                /translation="MQRIRPYWIKFEQTGGAGMADGMSGINIPSILGCSVTIDNLLTR
                AEEGLDVSDVIEDLRIQAIPRFVCEAREVTGLKPRFLANSVVSLRVKPEHQETVLVVL
                NGDSSEVSCDRYYMECVTQPAFRGFIFSVLTAVEDRVYTVGVPPRLLIYRMTLFRPDN
                VLDFTLCVILMYLEGIGPSGASPSLFVQLSVYLRRVECQIGPLEKMRRFLYEGVLWLL
                NTLMYVVDNNPFTKTRVLPHYMFVKLLNPQPGTAPNIIKAIYSCGVGQRFDLPHGTPP
                CPDGVVQVPPGLLNGPLRDSEYQKSVYFWWLNRTMVTPKNVQLFETYKNSPRVVK"
CDS             complement(93675..95984)
                /function="DNA packaging protein"
                /note="ORF54;
                orthologue of HHV-1 UL6"
                /codon_start=1
                /product="portal protein"
                /protein_id="CAA27937.1"
                /db_xref="GOA:P09302"
                /db_xref="InterPro:IPR002660"
                /db_xref="UniProtKB/Swiss-Prot:P09302"
                /translation="MAEITSLFNNSSGSEEKRIASSVSIDQGLNGSNPNDQYKNMFDI
                YWNEYAPDIGFCTFPEEDGWMLIHPTTQSMLFRKILAGDFGYTDGQGIYSAVRSTETV
                IRQVQATVLMNALDATRYEDLAADWEHHIQQCNLHAGALAERYGLCGESEAVRLAHQV
                FETWRQTLQSSLLEFLRGITGCLYTSGLNGRVGFAKYVDWIACVGIVPVVRKVRSEQN
                GTPAPLNTYMGQAAELSQMLKVADATLARGAAVVTSLVECMQNVAIMDYDRTRLYYNY
                NRRLIMAKDDVTGMKGECLVVWPPVVCGEGVVFDSPLQRLSGEVLACYALREHARVCQ
                VLNTAPLRVLIGRRNEDDRSHSTRAVDRIMGENDTTRAGSAASRLVKLIVNLKNMRHV
                GDITETVRSYLEETGNHILEGSGSVDTSQPGFGKANQSFNGGAMSGTTNVQSAFKTSV
                VNSINGMLEGYVNNLFKTIEGLKDVNSDLTERLQFKEGELKRLREERVKIKPSKGSHI
                TMAEETRIADLNHEVIDLTGIIGDDAYIANSFQSRYIPPYGDDIKRLSELWKQELVRC
                FKLHRVNNNQGQEISVSYSNASISLLVAPYFSFILRATRLGFLVTQSEVHRSEEELCQ
                AIFKKARTESYLSQIRILYEMQVRAEVIKRGPRRTPSPSWGLPDPTEDDERIPEPNKI
                NNQYMHVGYKNLSHFMKGHPPERLRVHKVNAADSTLLDKIRANRRRGDGRWDVRNKYT
                QHFRLQRNDRQLTNTSRRGVGCERRDRRS"
CDS             95996..98641
                /function="component of DNA helicase-primase complex"
                /note="ORF55;
```

```
                orthologue of HHV-1 UL5"
                /codon_start=1
                /product="helicase"
                /protein_id="CAA27938.1"
                /db_xref="GOA:P09303"
                /db_xref="InterPro:IPR003840"
                /db_xref="UniProtKB/Swiss-Prot:P09303"
                /translation="MKRSISVDSSSPKNVFNPETPNGFDDSVYLNFTSMHSIQPILSR
                IRELAAITIPKERVPRLCWFKQLLELQAPPEMQRNELPFSVYLISGNAGSGKSTCIQT
                LNEAIDCIITGSTRVAAQNVHAKLSTAYASRPINTIFHEFGFRGNHIQAQLGRYAYNW
                TTTPPSIEDLQKRDIVYYWEVLIDITKRVFQMGDDGRGGTSTFKTLWAIERLLNKPTG
                SMSGTAFIACGSLPAFTRSNVIVIDEAGLLGRHILTAVVYCWWLLNAIYQSPQYINGR
                KPVIVCVGSPTQTDSLESHFQHDMQRSHVTPSENILTYIICNQTLRQYTNISHNWAIF
                INNKRCQEDDFGNLLKTLEYGLPITEAHARLVDTFVVPASYINNPANLPGWTRLYSSH
                KEVSAYMSKLHAHLKLSKNDHFSVFALPTYTFIRLTAFDEYRKLTGQPGLSVEHWIRA
                NSGRLHNYSQSRDHDMGTVKYETHSNRDLIVARTDITYVLNSLVVVTTRLRKLVIGFS
                GTFQSFAKVLRDDSFVKARGETSIEYAYRFLSNLIFGGLINFYNFLLNKNLHPDKVSL
                AYKRLAALTLELLSGTNKAPLHEAAVNGAGAGIDCDGAATSADKAFCFTKAPESKVTA
                SIPEDPDDVIFTALNDEVIDLVYCQYEFSYPKSSNEVHAQFLLMKAIYDGRYAILAEL
                FESSFTTAPFSAYVDNVNFNGSELLIGNVRGGLLSLALQTDTYTLLGYTFAPVPVFVE
                ELTRKKLYRETTEMLYALHVPLMVLQDQHGFVSIVNANVCEFTESIEDAELAMATTVD
                YGLSSKLAMTIARSQGLSLEKVAICFTADKLRLNSVYVAMSRTVSSRFLKMNLNPLRE
                RYEKSAEISDHILAALRDPNVHVVY"
CDS             98568..99302
                /note="unnamed protein product; ORF56;
                orthologue of HHV-1 UL4"
                /codon_start=1
                /protein_id="CAA27939.1"
                /db_xref="GOA:P09304"
                /db_xref="InterPro:IPR004958"
                /db_xref="UniProtKB/Swiss-Prot:P09304"
                /translation="MKNPQKLAITFLPLYVIPTYTLCIKALYKNTHAGLLFSFLGFVL
                NTPAMSISGPPTTFILYRLHGVRRVLHWTLPDHEQTLYAFTGGSRSMAVKTDARCDTM
                SGGMIVLQHTHTVTLLTIDCSTDFSSYAFTHRDFHLQDKPHATFAMPFMSWVGSDPTS
                QLYSNVGGVLSVITEDDLSMCISIVIYGLRVNRPDDQTTPTPTPHQYTSQRRQPETNC
                PSSPQPAFFTSDDDVLSLILRDAANA"
regulatory      99353..99358
                /regulatory_class="polyA_signal_sequence"
                /note="ORF56"
regulatory      complement(99387..99392)
                /regulatory_class="polyA_signal_sequence"
                /note="ORF57"
CDS             complement(99411..99626)
                /function="tegument protein; role in virion egress"
```

/note="unnamed protein product; ORF57"
/codon_start=1
/protein_id="CAA27940.1"
/db_xref="UniProtKB/Swiss-Prot:P09305"
/translation="MDVRERNVFGNASVATPGEHQKFVRELILSGHNNVVLQTYTGKW
SDCRKHGKSVMYNTGEARHPTCKAHQR"

CDS complement(99607..100272)
/note="unnamed protein product; ORF58;
orthologue of HHV-1 UL3"
/codon_start=1
/protein_id="CAA27941.1"
/db_xref="GOA:P09306"
/db_xref="InterPro:IPR005035"
/db_xref="UniProtKB/Swiss-Prot:P09306"
/translation="MFSELPPSVPTALLQWGWGLHRGPCSIPNFKQVASQHSVQNDFT
ENSVDANEKFPIGHAGCIEKTKDDYVPFDTLFMVSSIDELGRRQLTDTIRRSLVMNAC
EITVACTKTAAFSGRGVSRQKHVTLSKNKFNPSSHKSLQMFVLCQKTHAPRVRNLLYE
SIRARRPRRYYTRSTDGKSRPLVPVFVYEFTALDRVLLHKENTLTDQPINTENSGHGR
TRT"

CDS complement(100302..101219)
/note="ORF59;
orthologue of HHV-1 UL2"
/codon_start=1
/product="uracil-DNA glycosylase"
/protein_id="CAA27942.1"
/db_xref="GOA:P09307"
/db_xref="InterPro:IPR002043"
/db_xref="InterPro:IPR005122"
/db_xref="InterPro:IPR018085"
/db_xref="UniProtKB/Swiss-Prot:P09307"
/translation="MDVSGEPTVCSNAYANEMKLSDSKDIYVLAHPVTKKTRKRPRGL
PLGVKLDPPTFKLNNMSHHYDTETFTPVSSQLDSVEVFSKFNISPEWYDLLSDELKEP
YAKGIFLEYNRLLNSGEEILPSTGDIFAWTRFCGPQSIRVVIIGQDPYPTAGHAHGLA
FSVKRGITPPSSLKNIFAALMESYPNMTPPTHGCLESWARQGVLLLNTTLTVRRGTPG
SHVYLGWGRLVQRVLQRLCENRTGLVFMLWGAHAQKTTQPNSRCHLVLTHAHPSPLSR
VPFRNCRHFVQANEYFTRKGEPEIDWSVI"

CDS complement(101170..101649)
/function="complexes with gH"
/note="ORF60;
orthologue of HHV-1 UL1"
/codon_start=1
/product="virion glycoprotein gL"
/protein_id="CAA27943.1"
/db_xref="GOA:P09308"

```
                     /db_xref="InterPro:IPR007923"
                     /db_xref="UniProtKB/Swiss-Prot:P09308"
                     /translation="MASHKWLLQIVFLKTITIAYCLHLQDDTPLFFGAKPLSDVSLII
                     TEPCVSSVYEAWDYAAPPVSNLSEALSGIVVKTKCPVPEVILWFKDKQMAYWTNPYVT
                     LKGLAQSVGEEHKSGDIRDALLDALSGVWVDSTPSSTNIPENGCVWGADRLFQRVCQ"
     regulatory      complement(103001..103006)
                     /regulatory_class="polyA_signal_sequence"
                     /note="ORF61"
     CDS             complement(103082..104485)
                     /function="role in modulating cell state and gene
                     expression"
                     /note="ORF61;
                     orthologue of HHV-1 RL2"
                     /codon_start=1
                     /product="ring-finger protein"
                     /protein_id="CAA27944.1"
                     /db_xref="GOA:P09309"
                     /db_xref="InterPro:IPR001841"
                     /db_xref="InterPro:IPR013083"
                     /db_xref="InterPro:IPR017907"
                     /db_xref="InterPro:IPR018957"
                     /db_xref="UniProtKB/Swiss-Prot:P09309"
                     /translation="MDTILAGGSGTSDASDNTCTICMSTVSDLGKTMPCLHDFCFVCI
                     RAWTSTSVQCPLCRCPVQSILHKIVSDTSYKEYEVHPSDDDGFSEPSFEDSIDILPGD
                     VIDLLPPSPGPSRESIQQPTSRSSREPIQSPNPGPLQSSAREPTAESPSDSQQDSIQP
                     PTRDSSPGVTKTCSTASFLRKVFFKDQPAVRSATPVVYGSIESAQQPRTGGQDYRDRP
                     VSVGINQDPRTMDRLPFRATDRGTEGNARFPCYMQPLLGWLDDQLAELYQPEIVEPTK
                     MLILNYIGIYGRDEAGLKTSLRCLLHDSTGPFVTNMLFLLDRCTDPTRLTMQTWTWKD
                     TAIQLITGPIVRPETTSTGETSRGDERDTRLVNTPQKVRLFSVLPGIKPGSARGAKRR
                     LFHTGRDVKRCLTIDLTSESDSACKGSKTRKVASPQGESNTPSTSGSTSGSLKHLTKK
                     SSAGKAGKGIPNKMKKS"
     misc_feature    104924..104925
                     /note="UL/IRL boundary"
     misc_feature    105013..105014
                     /note="IRL/IRS boundary"
     regulatory      complement(105141..105147)
                     /regulatory_class="polyA_signal_sequence"
                     /note="ORF62"
     CDS             complement(105201..109133)
                     /note="ORF62;
                     orthologue of HHV-1 RS1"
                     /codon_start=1
                     /product="transcription regulator"
                     /protein_id="CAA27945.1"
```

/db_xref="GOA:P09310"
/db_xref="InterPro:IPR005205"
/db_xref="InterPro:IPR005206"
/db_xref="UniProtKB/Swiss-Prot:P09310"
/translation="MDTPPMQRSTPQRAGSPDTLELMDLLDAAAAAAEHRARVVTSSQ
PDDLLFGENGVMVGREHEIVSIPSVSGLQPEPRTEDVGEELTQDDYVCEDGQDLMGSP
VIPLAEVFHTRFSEAGAREPTGADRSLETVSLGTKLARSPKPPMNDGETGRGTTPPFP
QAFSPVSPASPVGDAAGNDQREDQRSIPRQTTRGNSPGLPSVVHRDRQTQSISGKKPG
DEQAGHAHASGDGVVLQKTQRPAQGKSPKKKTLKVKVPLPARKPGGPVPGPVEQLYHV
LSDSVPAKGAKADLPFETDDTRPRKHDARGITPRVPGRSSGGKPRAFLALPGRSHAPD
PIEDDSPVEKKPKSREFVSSSSSSSSWGSSSEDEDDEPRRVSVGSETTGSRSGREHAP
SPSNSDDSDSNDGGSTKQNIQPGYRSISGPDPRIRKTKRLAGEPGRQRQKSFSLPRSR
TPIIPPVSGPLMMPDGSPWPGSAPLPSNRVRFGPSGETREGHWEDEAVRAARARYEAS
TEPVPLYVPELGDPARQYRALINLIYCPDRDPIAWLQNPKLTGVNSALNQFYQKLLPP
GRAGTAVTGSVASPVPHVGEAMATGEALWALPHAAAAVAMSRRYDRAQKHFILQSLRR
AFASMAYPEATGSSPAARISRGHPSPTTPATQAPDPQPSAAARSLSVCPPDDRLRTPR
KRKSQPVESRSLLDKIRETPVADARVADDHVVSKAKRRVSEPVTITSGPVVDPPAVIT
MPLDGPAPNGGFRRIPRGALHTPVPSDQARKAYCTPETIARLVDDPLFPTAWRPALSF
DPGALAEIAARRPGGGDRRFGPPSGVEALRRRCAWMRQIPDPEDVRLLIIYDPLPGED
INGPLESTLATDPGPSWSPSRGGLSVVLAALSNRLCLPSTHAWAGNWTGPPDVSALNA
RGVLLLSTRDLAFAGAVEYLGSRLASARRRLLVLDAVALERWPRDGPALSQYHVYVRA
PARPDAQAVVRWPDSAVTEGLARAVFASSRTFGPASFARIETAFANLYPGEQPLCLCR
GGNVAYTVCTRAGPKTRVPLSPREYRQYVLPGFDGCKDLARQSRGLGLGAADFVDEAA
HSHRAANRWGLGAALRPVFLPEGRRPGAAGPEAGDVPTWARVFCRHALLEPDPAAEPL
VLPPVAGRSVALYASADEARNALPPIPRVMWPPGFGAAETVLEGSDGTRFVFGHHGGS
ERPSETQAGRQRRTADDREHALELDDWEVGCEDAWDSEEGGGDDGDAPGSSFGVSIVS
VAPGVLRDRRVGLRPAVKVELLSSSSSSEDEDDVWGGRGGRSPPQSRG"
repeat_region 109762..109787
/note="reiteration 4"
rep_origin 110087..110350
/note="origin of DNA replication"
CDS 110581..111417
/function="host range factor"
/note="unnamed protein product; ORF63;
orthologue of HHV-1 US1"
/codon_start=1
/protein_id="CAA27946.1"
/db_xref="GOA:P09255"
/db_xref="InterPro:IPR003403"
/db_xref="UniProtKB/Swiss-Prot:P09255"
/translation="MFCTSPATRGDSSESKPGASVDVNGKMEYGSAPGPLNGRDTSRG
PGAFCTPGWEIHPARLVEDINRVFLCIAQSSGRVTRDSRRLRRICLDFYLMGRTRQRP
TLACWEELLQLQPTQTQCLRATLMEVSHRPPRGEDGFIEAPNVPLHRSALECDVSDDG
GEDDSDDDGSTPSDVIEFRDSDAESSDGEDFIVEEESEESTDSCEPDGVPGDCYRDGD

GCNTPSPKRPQRAIERYAGAETAEYTAAKALTALGEGGVDWKRRRHEAPRRHDIPPPH
GV"
regulatory 111426..111431
/regulatory_class="polyA_signal_sequence"
/note="ORF63"
CDS 111565..112107
/function="tegument protein"
/note="unnamed protein product; ORF64;
orthologue of HHV-1 US10"
/codon_start=1
/protein_id="CAA27947.1"
/db_xref="GOA:P09311"
/db_xref="InterPro:IPR000714"
/db_xref="UniProtKB/Swiss-Prot:P09311"
/translation="MNLCGSRGEHPGGEYAGLYCTRHDTPAHQALMNDAERYFAAALC
AISTEAYEAFIHSPSERPCASLWGRAKDAFGRMCGELAADRQRPPSVPPIRRAVLSLL
REQCMPDPQSHLELSERLILMAYWCCLGHAGLPTIGLSPDNKCIRAELYDRPGGICHR
LFDAYLGCGSLGVPRTYERS"
regulatory 112136..112141
/regulatory_class="polyA_signal_sequence"
/note="ORF64"
regulatory complement(112176..112181)
/regulatory_class="polyA_signal_sequence"
/note="ORF65"
CDS complement(112332..112640)
/function="membrane protein involved in axonal transport"
/note="unnamed protein product; ORF65;
orthologue of HHV-1 US9"
/codon_start=1
/protein_id="CAA27948.1"
/db_xref="GOA:P09312"
/db_xref="InterPro:IPR009278"
/db_xref="UniProtKB/Swiss-Prot:P09312"
/translation="MAGQNTMEGEAVALLMEAVVTPRAQPNNTTITAIQPSRSAEKCY
YSDSENETADEFLRRIGKYQHKIYHRKKFCYITLIIVFVFAMTGAAFALGYITSQFVG
"
misc_feature 112332..112333
/note="IRS/US boundary"
CDS 113037..114218
/note="ORF66;
orthologue of HHV-1 US3"
/codon_start=1
/product="serine-threonine protein kinase"
/protein_id="CAA27949.1"

/db_xref="GOA:P09251"
/db_xref="InterPro:IPR000719"
/db_xref="InterPro:IPR008271"
/db_xref="InterPro:IPR011009"
/db_xref="InterPro:IPR017442"
/db_xref="UniProtKB/Swiss-Prot:P09251"
/translation="MNDVDATDTFVGQGKFRGAISTSPSHIMQTCGFIQQMFPVEMSP
GIESEDDPNYDVNMDIQSFNIFDGVHETEAEASVALCAEARVGINKAGFVILKTFTPG
AEGFAFACMDSKTCEHVVIKAGQRQGTATEATVLRALTHPSVVQLKGTFTYNKMTCLI
LPRYRTDLYCYLAAKRNLPICDILAIQRSVLRALQYLHNNSIIHRDIKSENIFINHPG
DVCVGDFGAACFPVDINANRYYGWAGTIATNSPELLARDPYGPAVDIWSAGIVLFEMA
TGQNSLFERDGLDGNCDSERQIKLIIRRSGTHPNEFPINPTSNLRRQYIGLAKRSSRK
PGSRPLWTNLYELPIDLEYLICKMLSFDARHRPSAEVLLNHSVFQTLPDPYPNPMEVG
D"
regulatory 114236..114241
/regulatory_class="polyA_signal_sequence"
/note="ORF66"
CDS 114496..115560
/function="complexes with gE in Fc receptor"
/note="ORF67;
orthologue of HHV-1 US7"
/codon_start=1
/product="envelope glycoprotein gI"
/protein_id="CAA27950.1"
/db_xref="GOA:P09258"
/db_xref="InterPro:IPR002874"
/db_xref="UniProtKB/Swiss-Prot:P09258"
/translation="MFLIQCLISAVIFYIQVTNALIFKGDHVSLQVNSSLTSILIPMQ
NDNYTEIKGQLVFIGEQLPTGTNYSGTLELLYADTVAFCFRSVQVIRYDGCPRIRTSA
FISCRYKHSWHYGNSTDRISTEPDAGVMLKITKPGINDAGVYVLLVRLDHSRSTDGFI
LGVNVYTAGSHHNIHGVIYTSPSLQNGYSTRALFQQARLCDLPATPKGSGTSLFQHML
DLRAGKSLEDNPWLHEDVVTTETKSVVKEGIENHVYPTDMSTLPEKSLNDPPENLLII
IPIVASVMILTAMVIVIVISVKRRRIKKHPIYRPNTKTRRGIQNATPESDVMLEAAIA
QLATIREESPPHSVVNPFVK"
regulatory 115587..115592
/regulatory_class="polyA_signal_sequence"
/note="ORF67"
CDS 115808..117679
/function="complexes with gI in Fc receptor"
/note="ORF68;
orthologue of HHV-1 US8"
/codon_start=1
/product="membrane glycoprotein gE"
/protein_id="CAA27951.1"

/db_xref="GOA:P09259"
/db_xref="InterPro:IPR003404"
/db_xref="UniProtKB/Swiss-Prot:P09259"
/translation="MGTVNKPVVGVLMGFGIITGTLRITNPVRASVLRYDDFHTDEDK
LDTNSVYEPYYHSDHAESSWVNRGESSRKAYDHNSPYIWPRNDYDGFLENAHEHHGVY
NQGRGIDSGERLMQPTQMSAQEDLGDDTGIHVIPTLNGDDRHKIVNVDQRQYGDVFKG
DLNPKPQGQRLIEVSVEENHPFTLRAPIQRIYGVRYTETWSFLPSLTCTGDAAPAIQH
ICLKHTTCFQDVVVDVDCAENTKEDQLAEISYRFQGKKEADQPWIVVNTSTLFDELEL
DPPEIEPGVLKVLRTEKQYLGVYIWNMRGSDGTSTYATFLVTWKGDEKTRNPTPAVTP
QPRGAEFHMWNYHSHVFSVGDTFSLAMHLQYKIHEAPFDLLLEWLYVPIDPTCQPMRL
YSTCLYHPNAPQCLSHMNSGCTFTSPHLAQRVASTVYQNCEHADNYTAYCLGISHMEP
SFGLILHDGGTTLKFVDTPESLSGLYVFVVYFNGHVEAVAYTVVSTVDHFVNAIEERG
FPPTAGQPPATTKPKEITPVNPGTSPLLRYAAWTGGLAAVVLLCLVIFLICTAKRMRV
KAYRVDKSPYNQSMYYAGLPVDDFEDSESTDTEEEFGNAIGGSHGGSSYTVYIDKTR"
misc_feature 117564..117565
/note="US/TRS boundary"
regulatory 117716..117721
/regulatory_class="polyA_signal_sequence"
/note="ORF68"
regulatory complement(117756..117761)
/regulatory_class="polyA_signal_sequence"
/note="ORF64"
CDS complement(117790..118332)
/function="tegument protein"
/note="unnamed protein product; ORF64;
orthologue of HHV-1 US10"
/codon_start=1
/protein_id="CAA27952.1"
/db_xref="GOA:P09311"
/db_xref="InterPro:IPR000714"
/db_xref="UniProtKB/Swiss-Prot:P09311"
/translation="MNLCGSRGEHPGGEYAGLYCTRHDTPAHQALMNDAERYFAAALC
AISTEAYEAFIHSPSERPCASLWGRAKDAFGRMCGELAADRQRPPSVPPIRRAVLSLL
REQCMPDPQSHLELSERLILMAYWCCLGHAGLPTIGLSPDNKCIRAELYDRPGGICHR
LFDAYLGCGSLGVPRTYERS"
regulatory complement(118466..118471)
/regulatory_class="polyA_signal_sequence"
/note="ORF63"
CDS complement(118480..119316)
/function="host range factor"
/note="unnamed protein product; ORF63;
orthologue of HHV-1 US1"
/codon_start=1
/protein_id="CAA27953.1"

/db_xref="GOA:P09255"
/db_xref="InterPro:IPR003403"
/db_xref="UniProtKB/Swiss-Prot:P09255"
/translation="MFCTSPATRGDSSESKPGASVDVNGKMEYGSAPGPLNGRDTSRG
PGAFCTPGWEIHPARLVEDINRVFLCIAQSSGRVTRDSRRLRRICLDFYLMGRTRQRP
TLACWEELLQLQPTQTQCLRATLMEVSHRPPRGEDGFIEAPNVPLHRSALECDVSDDG
GEDDSDDDGSTPSDVIEFRDSDAESSDGEDFIVEEESEESTDSCEPDGVPGDCYRDGD
GCNTPSPKRPQRAIERYAGAETAEYTAAKALTALGEGGVDWKRRRHEAPRRHDIPPPH
GV"
rep_origin 119547..119810
/note="origin of DNA replication"
repeat_region 119990..120135
/note="reiteration R4"
CDS 120764..124696
/note="ORF62;
orthologue of HHV-1 RS1"
/codon_start=1
/product="transcriptional regulator"
/protein_id="CAA27954.1"
/db_xref="GOA:P09310"
/db_xref="InterPro:IPR005205"
/db_xref="InterPro:IPR005206"
/db_xref="UniProtKB/Swiss-Prot:P09310"
/translation="MDTPPMQRSTPQRAGSPDTLELMDLLDAAAAAAEHRARVVTSSQ
PDDLLFGENGVMVGREHEIVSIPSVSGLQPEPRTEDVGEELTQDDYVCEDGQDLMGSP
VIPLAEVFHTRFSEAGAREPTGADRSLETVSLGTKLARSPKPPMNDGETGRGTTPPFP
QAFSPVSPASPVGDAAGNDQREDQRSIPRQTTRGNSPGLPSVVHRDRQTQSISGKKPG
DEQAGHAHASGDGVVLQKTQRPAQGKSPKKKTLKVKVPLPARKPGGPVPGPVEQLYHV
LSDSVPAKGAKADLPFETDDTRPRKHDARGITPRVPGRSSGGKPRAFLALPGRSHAPD
PIEDDSPVEKKPKSREFVSSSSSSSSWGSSSEDEDDEPRRVSVGSETTGSRSGREHAP
SPSNSDDSDSNDGGSTKQNIQPGYRSISGPDPRIRKTKRLAGEPGRQRQKSFSLPRSR
TPIIPPVSGPLMMPDGSPWPGSAPLPSNRVRFGPSGETREGHWEDEAVRAARARYEAS
TEPVPLYVPELGDPARQYRALINLIYCPDRDPIAWLQNPKLTGVNSALNQFYQKLLPP
GRAGTAVTGSVASPVPHVGEAMATGEALWALPHAAAAVAMSRRYDRAQKHFILQSLRR
AFASMAYPEATGSSPAARISRGHPSPTTPATQAPDPQPSAAARSLSVCPPDDRLRTPR
KRKSQPVESRSLLDKIRETPVADARVADDHVVSKAKRRVSEPVTITSGPVVDPPAVIT
MPLDGPAPNGGFRRIPRGALHTPVPSDQARKAYCTPETIARLVDDPLFPTAWRPALSF
DPGALAEIAARRPGGGDRRFGPPSGVEALRRRCAWMRQIPDPEDVRLLIIYDPLPGED
INGPLESTLATDPGPSWSPSRGGLSVVLAALSNRLCLPSTHAWAGNWTGPPDVSALNA
RGVLLLSTRDLAFAGAVEYLGSRLASARRRLLVLDAVALERWPRDGPALSQYHVYVRA
PARPDAQAVVRWPDSAVTEGLARAVFASSRTFGPASFARIETAFANLYPGEQPLCLCR
GGNVAYTVCTRAGPKTRVPLSPREYRQYVLPGFDGCKDLARQSRGLGLGAADFVDEAA
HSHRAANRWGLGAALRPVFLPEGRRPGAAGPEAGDVPTWARVFCRHALLEPDPAAEPL
VLPPVAGRSVALYASADEARNALPPIPRVMWPPGFGAAETVLEGSDGTRFVFGHHGGS

```
                     ERPSETQAGRQRRTADDREHALELDDWEVGCEDAWDSEEGGGDDGDAPGSSFGVSIVS
                     VAPGVLRDRRVGLRPAVKVELLSSSSSSEDEDDVWGGRGGRSPPQSRG"
     regulatory      124751..124756
                     /regulatory_class="polyA_signal_sequence"
                     /note="ORF62"
ORIGIN
        1 aggccagccc tctcgcggcc ccctcgagag agaaaaaaaa aagcgacccc acctccccgc
       61 gcgtttgcgg ggcgaccatc ggggggggatg ggatttttg ccgggaaacc ccccccgcc
      121 agcctttaac aaaacccgcg ccttttgcgt ccacccctcg tttactgctc ggatggcgac
      181 cgtgcactac tcccgccgac ctgggacccc gccggtcacc ctcacgtcgt cccccagcat
      241 ggatgacgtt gcgacccccа tcccctacct acccacatac gccgaggccg tggcagacgc
      301 gccccccccc tacagaagcc gcgagagtct ggtgttctcc ccgcctcttt ttcctcacgt
      361 ggagaatggc accacccaac agtcttacga ttgcctagac tgcgcttatg atggaatcca
      421 cagacttcag ctggcttttc taagaattcg caaatgctgt gtaccggctt ttttaattct
      481 ttttggtatt ctcaccctta ctgctgtcgt ggtcgccatt gttgccgttt ttcccgagga
      541 acctcccaac tcaactacat gaaactactg tccggaaggg gaaggtattt attctcgctt
      601 gcagcttgtc gcgcgtgtat gcacaacaaa agctatatat gtcaccaaag ccaacgtcgc
      661 catctggagt actacaccca gtacgttgca taacctgtcc atttgcattt tcagttgcgc
      721 ggacgccttt ctccgggatc gtggccttgg gacatcaacc agtggaataa gaaccgccgg
      781 tggtcttgtt tgaacgacga gtggcgacgc gttgttctgc ataagctctg tatgctgata
      841 cataaacaca gagtctgtat cgctatcaga ttcccgaaca ccttccggta ccccatactc
      901 cgataccctg gacattgcgg atcccaaaaa tataatatta acaggatttg cttatacttt
      961 gctacagctt atataaattt atgtgcgata catcttaagt gcatccgtac gttatttata
     1021 cattgcctgt cacgtgaaaa gactgtgtta cccaataaag gttctacaaa aaatgcttta
     1081 ttgggtgttt gtttaatagc tattatcgta acccaccccc gtaaaatcat aaaatgcatg
     1141 taatttctga gacacttgca tatgggcatg ttcccgcatt tattatgggc tccactctgg
     1201 tgcgtcccag tttaaacgcc accgccgagg aaaatcccgc gtcagaaacg cgatgtttat
     1261 tacgagtgct tgcggggaga actgtagacc tgccaggcgg aggaacgtta cacattacct
     1321 gtaccaaaac ctatgtaatt attggcaaat atagcaaacc cggcgaacgt cttagccttg
     1381 cccgtctaat agggcgtgca atgacgcctg gaggtgcaag gacatttatt attttggcga
     1441 tgaaggaaaa gcgatccaca acgcttgggt atgaatgtgg tacgggcttg catttactgg
     1501 ctccatctat gggtacattt ctccgcacac acggtttaag taacagagat ctctgtttat
     1561 ggcggggtaa tatttatgat atgcatatgc aacgtcttat gttttgggag aatatcgcgc
     1621 aaaataccac tgaaacacct tgtataacgt cgacgttaac atgcaacttg acagaagact
     1681 ctggtgaagc cgcacttacc acgtcagacc gacccactct cccaacccta acagcccaag
     1741 gaagaccaac agtttccaac attcgtggaa tattgaaagg atccccccgt caacagccgg
     1801 tctgtcaccg ggttagattt gccgaaccta cggagggcgt attgatgtaa tcactaaata
     1861 aaatacacct tttttcgatt gtacgtattt ttatttaaat gtgtagttca tagtccgccg
     1921 acagccgctc gggcttttcc cccacataca acatgatcgt atgcctcgga tgcaccggtc
     1981 caacactccg ccgagaaggg ggatttacaa tgacagtgat acccaatagc cgccagatgt
     2041 acacccagct gtccggactc cagcatcatc tgctgagttg cggcgctgaa gggtgcatcg
     2101 catagggtgt tataattagc catttccggt aacagtcgtt gggaatttag gaggctgcaa
     2161 aacggctgta ggtcaacata cattggggat tcagatggtt tatctcgacg tccaagtcca
     2221 atcaaaaaag cgtgtaaatc atcagcccgg ccgcatgttg ctcgaagagc acataacctc
```

2281 ttaacaccgt acagagggga tggcgtcggt gcatgtgagt tggcagggca tgtccacgtt
2341 gtttccaacg ccagtggcgg tataacttgt gtaaacgacg ccaacgggtc aggtttaaga
2401 ttcactcgga tgggttgact gctttcggaa gctcccgttg tatccattaa ttaaacgttc
2461 ggtacacgtc tggtgtgtgt tttacccgaa tcagagacgg aattgcaaag atattggttt
2521 gaaagcaatg taatcccgcc catatatccc caacgtcgcc ttaaaaactc ccacaatatt
2581 acatttttat tagtctttta ttaatataga atcacataaa caattgataa aatcaagggg
2641 tggtgtataa tgattaaaaa tataaattga tatgttttac aagcatgaaa taggtattta
2701 ctattctaac aggtaaatat gcttaatgat taaaaataca aattagtatg ttttgacaag
2761 catgaaaaag gtatttttta ttttagcagt taaaggtact acacttaaaa tatttaccgt
2821 atggacgggc gtcagaaaga tgcccggccc aagttgagag ggtacattca acacgaccac
2881 actcgcgttg gtgggtgatt agggcctcta aaacaccggc cagacatgac ccgggtgtat
2941 attcttgtaa cacttgaacg ttacaactga tatcatcata ttccacaaat ttagagccac
3001 ggacaactat attagcaatg cgggcaatca taacaaacat ataagtagta atacacgtga
3061 tatcactaaa acgttgctgg cgcaacagtt cggggagagt acgagacccc aaatcgttgt
3121 ccctgtttag aagaagacat cttacaaaag gccccagctt taactttaaa ttctccaaaa
3181 gtgacttcga ggttgcaaca atgggattat ttgtgtagat gggcaagttt tttgccgcta
3241 acattttaat ccacgttaac agttcatccg cagactccaa cgcttcaatc aaagattctc
3301 cacgtatgac tctctcacgc aacgcgcggg caatacgtga gtccatttta tatgactcaa
3361 aggtacgata aagttcatgt ccgtacaaca tcaactccgg ccaagatgtg ttttgtttta
3421 tccccggaaa acatccaccg gaagcccatg aatcaccctc ttgtattgtg gcatatcgga
3481 ctaccagttt ttcaattgtt tcatctaaat ggcgtaccga gtcaatggtc acgctggctc
3541 ccgcggtgga gacgacttca atagcacggc ccgtaattcg atcgaccggg atatcatact
3601 cttttcgaat acgctctcgg cgggcgtctc tcttggaaaa tcgcaacctg tacgattcgt
3661 catgtgtctg atcatttctt tctcccgtgg tcattgcagg aggcgttgta ggacgccgtc
3721 ttcgatttga cagggatcga tcacggtgtt ttcttgaact ttgagtgtta taagatctgg
3781 atgatcgtcg atgtccccgt tcgatgcgtg catatccagt ctccacgtct cttcctccat
3841 gatggtttga atcgggtaat acaacaacca aagttttcgg gcgattgtgg tggtagcttt
3901 cacgccttcc gtgccttcgt ttggaatacc gtggattata tgctgtatct gcagtacgct
3961 ccacatacac agttctagac gttgtggagt cctcgcctgg agtggagcca atagcttcat
4021 catttgccca atcggtgact tccaatgcaa agtcatccga aggttcgtct ggtagcaaat
4081 tcataaagtc ttcacaaata gtagacacgt ctgggtcggt tggaattgaa gcagaggcca
4141 tggctgcaaa atatctgaca attgcgtgtt tgcagttgcc tgtatcttcc gccaatgttg
4201 tagaatttat aggctcaccc aaccccgcaa tgggcgtgtt tagtcacatg attaatgctt
4261 ctgggagttt tcactttccc caaacaagct tacctgcacc ctttgttcgt aatgcataaa
4321 aataaccact gctatagcaa atatgacgat ataaaaacat tttatagcaa ggccggacat
4381 tactgtagcg caacatgttg tgcatatacc acgtattccc cccgtattga tatgatttaa
4441 atgattatcc ttggttggtt ttggtctaac ataagatata agctctacta tagcgagcgt
4501 gcatacaaca acccaggcca gaatccgaat gtatgtgggg tataataacg cgcatggtgt
4561 atatgcaacg ccaagcgtta aaagcacaat acatccagat gatatatgag cgataacctc
4621 caaaagcatc aataacgtaa caccttttatg catatataaa aaacttatag ggtcagcatt
4681 aaatacttta ctcataccat cccgtcgcat ggaaacatca cataacaacc ttgccaactt
4741 tgtatatggg taaccaagaa gaatgttcga aataacccgt gttacgtaat tcagtgaata
4801 tgatgtgggg gatattaact cacaggatga tcggaatggc ccaaacatac gacgtattcg
4861 tcgaaattgt aaatacatac catatacaaa ccatgcaaaa aaaatcattt ttagctgcac

4921 gcaccaaaaa taagcgtgac aattacgtgt tcccagaaca attcgaattt tgtcatgcaa
4981 aggtgtagaa atagcggttt ttaccatagt atctcctgat aatagatttt cccggcagct
5041 gtaatcgtat ccagataggc catccaaaaa cgttgagtgg tttacaaacg ttacatatat
5101 aagagagttg ttataagacc cccatacaac cggtccacca ttaatcaccg tggttgcata
5161 cacacactca tgttcaaact ttacacgagc ggtataccat agggtaaaaa cagcatgtcc
5221 gctaagtaga cacataatta taaaatgttc tgtcttgatt cctaaagcct gcatgacccg
5281 tggaagatgg caattcaagc acgatgtagt atcacacggt tggtgttaac tcgaagttaa
5341 atttggataa ttaggtactt ctagagtaaa gattgtatgc atgcgattgc tatcgcactt
5401 tgtagcaaaa cattgttgtg caagcgaaat acacaaacgg ttgtgatgat ccactcgcag
5461 agacacaaat gtccggggag ccgttcttcc tccgcgatgg ggatatcgaa gacaagtgaa
5521 ccctttttgtt ccgcatatga gctgaaataa cacccagtcc cttttgatgg cgatacactt
5581 tgatgatgtt aaggtatatt cgcgatcacg cccggggaaa tgaacagcaa tatgctccac
5641 aatagattct aatattgtgc tgtcgacaaa ggcctccagt gtaaatgcgt ccagacaagt
5701 taccccgcgc tcttttagag cctttgttaa agatatttgc ggggagctaa atatttgttt
5761 attacgcgca accttacgtt caaaaaactc tgcgtattcc cccccaaggt tatgtaaaat
5821 aaattgcact ggaacattcg actgcggtct tgaatgaaaa tgaaagtttg ccgggtttct
5881 atgtgatgtc acaaacgcta atatatcaat acactgctca ggtacaacat aaaatgggag
5941 tagttgtcca accgccgtcc ctgtggttgt tactttggag aaaaaaggca gtcttaaact
6001 atgtccgtgg ctataaacac cagtatctat aaacgaaaag tcccgtaaat acggaccaat
6061 atattcaaca aattcccgtt ccagcaacac cgcttgctgt aatatttgtg caaacccctt
6121 taaagtggaa gaccccacta acgcataggg atttgggatt ggtacgcata ccctgaaacc
6181 tattttctct ttacagttac agggtagagt ttcatgcaag ttttcattgt ttgatacatc
6241 ggcgtgtgta tggacttcag acgttgtctg tgtatcaaaa aaccatacat cctctgtata
6301 attctcttct acacacgtgt ataattcgcc attttctatg taaaaatcga tgtcagaatg
6361 gctggttata tccaataaat tatcatcatc caacacctca acggtaggtt caggacatgc
6421 agttttataa aaataacatg ggtctttgtt agggtttacc acggcctttg gaaaaagtaa
6481 ttgcatggcc gttaaaatac catgacgaaa tgctcgcatg ccggcatgta aaatacccaa
6541 tgggatgggt tttcttatat gaaagtctac atcaagtatg aggtttgtga ttataagatt
6601 tgtattaaat agctcattcc tgtttatata aagctgatct ttgggtatgt ttgatgaaat
6661 tttagaaacg tttttaacag acgtagataa tagtaaagtc aactgcatat ctcgtagtga
6721 agcggcaaca aaattacatg gattaatttg tttaaggtcc tccgcaatta atcgagcctc
6781 gtgcggtaaa gtgtaacggt ttgttattga tgaccacgta tcattagcaa taacagcaaa
6841 tgcttgggcg ccgtgaggca aggctacccg atatacaggc attggtccag ttacctcaga
6901 atggccgatg agggcttcta atggagtttt ataactcagg atggatacat catgtgtggc
6961 tatcccagtg gcagcagaga aaaacagtaa tagttttgta atccccgggc tcgtatcaaa
7021 accagtacga ccactttggt taggtgtatc gtttgcaaag ttggctgctc gtaacgcctc
7081 cgcggaaaca cccgaatcct caaaattaga caattcgtca aaaccgggtg gatttgaggg
7141 aatagtggag gaccatccat atggactaaa ttgtttttca atgttttcca cacgacgagt
7201 tagcgttgta gctaggtcac atacgcctat aaacttgcta ggttttgcgg catacgtaag
7261 acttaaagta tatgttttag taattgtata tttatgtcca atctcaggtc caagttcagt
7321 gacatcacaa attacgttct tttttatata gtcacgcatg ttgagacgag aacgtacatg
7381 attaaaaaaa ttagcagtag ctctttttcc caggttggat gattttaaga ggaccggttt
7441 attcacaaaa tctgagtatg taaccgcttg taggtggtct gcgatctgtt tccgattgaa
7501 acattcaaaa tgtgccagat aaatataatc aacaaattca cggtctggaa ctttaaggcc

7561 ttttctatcg ttggtaatat actccgatac tgcgtgtatt tccgttgtgt ctgtatgtat
7621 tcgctgtaaa atgtacgata gagcattttt ggctgtcaaa cctcgtgtat atgttgagga
7681 acaacaaaac atggaaagtt tatcaaaaga caacaagtcc gaaatattgt acccactaca
7741 attaggtaat gccgggactt ggtaagttaa aaacaaatct ttaattgcct gtaagtcata
7801 taaggggttt tccaacgtat tgtaacttgt gtccgtttgt aacaagtaat agcgtgtagc
7861 caacactagc gttttttcag agggtccaaa tcgaacaata taccaaaacg gcgagcatcc
7921 ataccccag tagagtcgtc gatatgcagc caatacttga cgttcgtaat gggcatataa
7981 tgatgttagc tcctgacgac caacggattt tttaactaac ttgcagagtg ttgcctctgt
8041 gatgcatagg ccgttgtccg ataatccctt tcggtttaaa tggtgtgttg ttaccatcag
8101 agtttgtata acttccgagt gaatgtcaaa cgtctccgat atacataggg tatcagatat
8161 tatatgcgga tttaggggtg ctccatacca taacgcctta tataaagctt taaaatcagt
8221 ttgggtttta aaacaacaaa aaaatatagg ccagacccgg gatcgtacat ctccagttga
8281 aaatccacca attaaataaa aaataacgtt gacgtcccta ctacaaaata aatgcattat
8341 ttggttttct tcatcgtttt cagttacttc acgtgggcgt ttagttggga ttacttgcgt
8401 gatctcttcc ctcccatttt tgacaaagac gtcatctaag tcgggagtcc aagtataact
8461 caccacatac agaggttctg tgcttatctg cccggtaagc aacaacagcg agtgggagat
8521 tgcacatccc tttgtggcaa ataataaccg aatcgtcggt ttggaggatt tatccatagt
8581 tcaatacgtt ggaaagccag tcaatcatgc agacggtgtg tgccagctta tgtggatatg
8641 ctcgaatacc aactgaagag ccatcttatg aagaggtgcg tgtaaacacg cacccccaag
8701 gagccgccct gctccgcctc caagaggctt taaccgctgt gaatggatta ttgcctgcac
8761 ctctaacgtt agaagacgta gtcgcttctg cagataatac ccgtcgtttg gtccgcgccc
8821 aggctttggc gcgaacttac gctgcatgtt ctcgtaacat tgaatgttta aaacagcacc
8881 attttactga agataacccc ggtcttaacg ccgtggtccg ttcacacatg gaaaactcaa
8941 aacggcttgc tgatatgtgt ttagctgcaa ttacccattt gtatttatcg gttggcgcgg
9001 tggatgttac tacggatgat attgtcgatc aaaccctgag aatgaccgct gaaagtgaag
9061 tggtcatgtc tgatgttgtt cttttggaga aaactcttgg ggtcgttgct aaacctcagg
9121 catcgtttga tgtttcccac aaccatgaat tatctatagc taaaggggaa aatgtgggtt
9181 taaaaacatc acctattaaa tcggaggcga cacaattatc tgaaattaaa cccccactta
9241 tagaagtatc ggataataac acatctaacc taacaaaaaa aacgtatccg acagaaactc
9301 ttcagcccgt gttgacccca aaacagacgc aagatgtaca acgcacaacc cccgcgatca
9361 agaaatccca tgttatgctt gtataaatat tgaaataaaa actaaaaacg tttctggtgt
9421 atgtttttat tttgtatata aaattaaaac attgctggct ggcgtggtta ttacatttaa
9481 tgttttagta gaaaatcgac atcgtttgtt tctttatcag ttgaaccaaa tccacgcgtt
9541 ccccgttcgc tgggtgtggc tattagatct aacgttttag taaaatacca ttgtacaccc
9601 ggtatgccac atttaccgcg gatagcataa ggaaatgcaa tattacttaa aacgttgtgt
9661 tttaagtgta tttgggtgtt gtgatctatt aacaggacct gtgcaagacg atctcccgtt
9721 tttatacgta tgtcatcacc cgtgagatta tatacgtaga atttacagtg ttctcctgca
9781 ggccatgccg ttggacacac gataatgcct gatcggcttt tcgatgatct tccaaaaata
9841 taagcgttta tactcggatg ttgtaagtcc cagtctctta taatcggtaa gacaattttt
9901 ataaattcat tccttttaa atataggtta tatggtacac aaatatcata tcccgcgtct
9961 tcttggcgtt ttggattgat gatatgtttg taggttaagg gaacatcgat atggtattct
10021 gcagaatccc tatgtaaagg ttgcccctgc tgtaccgtgg aaatatcagc aaattcaggt
10081 ataacgggtt tttcataatt tgacggcgag tttgataagg gttgaacttg tatcgattta
10141 aaaattggat ccagatgttt aagaacgttt tttgggagaa ggcgactttg tcttaatttt

10201 accgggaaca agtagattgt taaatgtccg ggtaaaataa cggttactcc tggccggtaa
10261 tacaaaaggg ctgaaattac tcctctgtaa cccgcatcaa taactccgtt ggcgacaaaa
10321 aaattgtctt catcagcaag ggcagtatct ttgcattgaa ttaacaacag tgcgtattca
10381 ttgggaggcg ccgacttaac caacagctcc aactgctgca tataaaaacc gccccgtgtt
10441 acagattttt cagatggcag ttcgagtttc ttgtggttcc ggagtaacaa cggttgatgt
10501 cgacttactt tatcgtctaa cacgcattgc agcgtatctg cacattcagg ttgaacttct
10561 attaaaattg tatcttttaa acaccgattc ggaatagttt ggctacaaaa catatcacct
10621 gtatttactg ccgtttccaa gatgggatca attaccgctt cgttcatatt aataacgatg
10681 caaattttat ttttttgtga agacagcagt ggggagccaa actttgcaga acggaatttt
10741 tggcatgcca gctgttcggc tcgtggagtt tatatcgacg gatcaatgat caccaccctt
10801 ttcttctacg catccctttt gggggtgtgt gtagccctta tttcgttagc ttatcatgcg
10861 tgtttccggt tatttactcg ttctgtatta cgcagcacgt ggtaaacccg tttgcctata
10921 aaaggggcag gcgtgtataa gagggcccct gtttaatacg cggtctgccg tgtttggata
10981 tttcacgacc ctatcgttta tttacgtaat ggcatcttcc gacggtgaca gactttgtcg
11041 ctctaatgca gtgcgtcgta aaacaacgcc tagttattcc ggacaatatc gaaccgcgcg
11101 gcgaagtgtg gtcgtaggac cccccgatga ttcagacgac tcgttgggtt acattaccac
11161 agttggggcc gattctcctt ctccagtgta cgcggatctt tattttgaac ataaaaatac
11221 gacccctcgc gtacatcaac caaacgactc cagcggatcg gaagatgact ttgaagacat
11281 cgatgaagta gtggccgcct ttcgggaggc ccgtttgaga catgaactgg ttgaagatgc
11341 tgtatatgaa aacccgctaa gtgtagaaaa accatctaga tcttttacta aaaatgcggc
11401 ggttaaacct aaattagagg attcaccgaa gcgagctccc ccgggagcag gcgcaattgc
11461 cagcgggaga ccaatttcct tcagcactgc accaaaaacc gcaacaagct cgtggtgcgg
11521 tcctacgcca tcatataaca aacgcgtctt ttgtgaagcg gtccggcgcg tagccgccat
11581 gcaggcacaa aaggctgccg aagcggcttg gaatagtaat cccccaagga ataacgccga
11641 attagaccgt ttgttaaccg gagccgttat tcgtattacg gtgcatgagg gtttaaattt
11701 aatacaagcc gctaatgaag cagacctagg tgaaggagca tcggtatcca aacgtggaca
11761 taatcgaaaa actggagatt tacaggggggg catgggtaat gaacctatgt acgcacaagt
11821 tcgtaagcca aaaagtcgaa cggatacaca aacgactggg cgtataacta atcgaagtag
11881 ggcccgttct gcatcaagaa ctgatacgcg aaaataggga tataattacg cagtaacggt
11941 ttacccggta ttatgtataa taaataaacg tataaaagac agtcgtggtt tgtgtttatt
12001 ataaatgtgt attatatgtc acatattata aactgtttaa atagtaccac gtggtattat
12061 gaacagttta taatcagttg ctaccaaaca aaccccatta gacggcgggt tttgataaag
12121 ggaatcgctt atttaaacta aagattttac tctataagta tggagtgtaa tttaggaacc
12181 gaacatccta gtacagatac gtggaatcgt agtaaaacgg aacaagcggt tgtggacgca
12241 tttgatgaat cgttgtttgg tgatgtagca tcggatattg gatttgaaac gtcgttatat
12301 tcacatgcag ttaaaactgc tccgtctccg ccttgggtag ctagccctaa aattttatat
12361 caacagttaa tacgggatct tgatttttca gaagggccgc gtttactatc atgtcttgaa
12421 acctggaacg aggatttatt ctcatgtttt cctattaatg aggacctata ttccgatatg
12481 atggttttat ccccggatcc agatgacgtt atctcaaccg tttcaaccaa agaccatgtt
12541 gaaatgttta atttaacaac ccggggttcc gttcgattgc ctagtccacc aaagcaaccg
12601 acggggcttc cagcttacgt tcaggaggtc caggattcgt ttaccgtaga actacgcgcc
12661 cgggaagaag catacacaaa actactagtt acttattgta aatcgattat acgttatctc
12721 caaggaacgg cgaaaaggac gacaataggt cttaatatac aaaaccctga ccagaaagct
12781 tacacgcaac tcaggcaaag tattctactt agatattatc gtgaggtggc aagtttggcg

12841 cgtcttctgt acctacattt atatttaacc gtaacgcgtg aattttcctg gcgtttgtac
12901 gccagtcaat ctgcacaccc ggacgtgttt gcggctttaa aattcacctg gaccgaacgt
12961 cgacagttca cgtgtgcgtt tcatcctgta ttatgcaacc acggcattgt gttattagaa
13021 gggaaaccac taacagcgtc tgccttgagg gaaataaatt accgccgccg agaactggga
13081 ctgcctctag ttagatgtgg tcttgttgaa gaaaacaaat ctccgttggt tcaacaaccc
13141 tcattttcgg ttcatttacc acggtcggtg ggttttctta cccaccacat taagcgtaag
13201 ttagacgcat atgcggtcaa acatcctcaa gaaccgagac atgtacgagc ggatcatcct
13261 tacgcaaaag ttgttgaaaa tagaaactac ggtagtagca tcgaagctat gattttagca
13321 cctccgtccc catccgagat cctgccgggg gacccaccac gcccacccac gtgtgggttt
13381 ttaacgcgtt aaacgtcatt ggggtagagg gtgtaaataa attacgaaaa cgtgcatgcg
13441 ttttttattt ttacaatgcg ccgtatatgg tatgtctgtc atgtgctcta aagtcccata
13501 tataaaagaa gccccaacga gtgtatgcgt attgcgtacc gcgaccctgg gatgttttac
13561 aggcgcgttt gtttgtctcg gttataagta tgcagtcggg tcattataac cggaggcaat
13621 cccgccgaca gcggatatcg tctaatacca cagactcccc ccgtcacaca cacggaacac
13681 gttatcggtc aaccaattgg tatacacacc caccccagat attgtccaat tcagaaacat
13741 tagttgcggt tcaagaacta ctgaactccg agatggatca ggacagcagt tctgacgcat
13801 cggatgattt tccgggatac gccttacatc attctacata taatggatcc gaacaaaata
13861 catcaacttc cagacatgaa aatcgcatat ttaaattaac ggagagggaa gctaatgagg
13921 aaatcaacat caatacggac gcgatcgacg acgagggaga ggcggaggag ggagaggcgg
13981 aggaggacgc gatcgacgac gagggagagg cggaggaggg agaggcggag gaggacgcga
14041 ttgacgacga gggagaggcg gaggagggag aggcggagga ggacgcgatt gacgacgagg
14101 gagaggcgga ggagggagag gcggaggagg gagaggcgga ggagggagag gcggaggagg
14161 acgcgatcga cgacgaggga gaggcggagg aggacgcggc ggaggaggac gcgatcgacg
14221 acgagggaga ggcggaggag gattattttt ctgtaagtca agtttgcagt cgagacgcgg
14281 atgaggttta ttttacgtta gacccggaaa taagttacag taccgatctt cgcattgcaa
14341 aggttatgga gcctgcggta tcaaaggaac ttaatgtatc aaaacgttgt gttgaacctg
14401 ttaccctaac aggctctatg ttagcgcata atgggtttga tgagtcctgg tttgctatgc
14461 gcgaatgtac ccgtcgcgaa tatattacgg tccaaggatt atacgaccca attcatttac
14521 ggtatcagtt tgatacttcc cggatgacac ccccacagat tttgagaact ataccagccc
14581 ttcctaacat gacacttggt gaacttttat tgatttttcc tattgaattt atggcccagc
14641 caatttctat agaacgtatt ttagttgaag atgtattttt agataggcgg gcttccagta
14701 aaacacataa atacggcccg cgttggaatt ccgtctacgc acttccatat aatgcgggta
14761 aaatgtatgt acaacacatt cctgggtttt atgacgtgtc cttacgtgct gtgggccaag
14821 gaacggccat ttggcatcac atgatattat ccacagcagc atgcgctatt tctaatcgca
14881 tttcacatgg agatggatta ggatttttgt tagacgcggc aattcgtatt agcgcaaact
14941 gtatttttt gggacgtaac gataattttg gcgtgggga tccatgttgg ttagaagacc
15001 atcttgccgg attaccacga gaagccgtac ccgacgtact ccaagtgaca cagttggttt
15061 tgccaaatcg gggtccaacg gttgccatta tgcgtggttt ttttgggggcg ttggcatatt
15121 ggcccgaact aagaattgct ataagtgaac catctacatc tttggtgcga tatgctaccg
15181 gtcacatgga acttgccgaa tggtttttat tttcacgtac acatagttta aagccacaat
15241 ttaccccaac ggaacgggaa atgttagcgt catttttac gttgtatgtt actcttggtg
15301 gaggaatgtt gaactggatc tgtagagcaa ctgcaatgta tttagctgct ccttaccatt
15361 cccgttcggc ttacatcgcg gtctgtgaat ctctgcccta ttactatatc ccggttaata
15421 gtgacctgtt atgtgattta gaggtattac tgttaggcga ggtcgacctc ccaactgttt

15481 gtgaatccta cgcaactatt gcacacgaat taaccggata tgaggctgtt cgcacagcag
15541 ccacaaattt tatgatagag tttgccgatt gttataagga aagtgagacc gatttaatgg
15601 taagcgcgta cctgggggcc gttttattgt tacaacgggt gttgggtcat gcaaatcttc
15661 ttttgttgct tctctccggt gctgcgttgt acggaggatg ttcaatttac atcccccgag
15721 gtattttaga tgcatataat actttaatgt tggcagcaag tcctctttac gctcaccaaa
15781 ctttaacatc cttttggaaa gaccgcgatg atgcaatgca aactttgggg attcgaccga
15841 caacggacgt tttacccaaa gagcaagaca ggatagttca ggcatcacct atagagatga
15901 acttccgttt tgtgggattg gagaccatct atccccgaga acagcccatt ccctccgtgg
15961 acctagccga aaatcttatg caatacagga atgaaattct gggtttggat tggaaaagcg
16021 tagccatgca tttactacga aaatattaag ggttgtgatt tttttcatta ggatgaaaag
16081 aacgtttcct agccacaccc acaaaggagt ttgtaaaata aaatctctgt ttagacctta
16141 aaatttgttg tgtgtgttgt gtgggggggtc cgtgaggatc gacctttaca agatataatt
16201 tgtccatatc gcaatgtttt ctcggtttgc gcgttccttt tccagcgatg atagaacgcg
16261 taaatcttat gatggtagtt accaaagttt taatgccggc gaacgtgatt tgcccacacc
16321 tacccgggac tggtgttcta tttcccaacg cataaccagc gagcgcgtga gggatggatg
16381 tcttattcca acgcccggcg aggctttgga gacggcggta aaggctttat ctgaaaagac
16441 cgacagccta acatcgccgg ttttacaaag taccgaaaga cacagtgttc tgcttggatt
16501 acaccataat aatgttcctg aatcgttggt ggtctcgtgt atgtctaacg atgttcatga
16561 cgggtttatg cagcgttata tggaaacaat tcaaagatgt ttggatgacc tgaaactttc
16621 tggggatgga ctttggtggg tttatgaaaa tacatattgg cagtatctca aatacaccac
16681 aggagccgag gtaccggtga cttcagagaa ggtaaataaa aagtctaaat ccacggtttt
16741 gttgttttca tccgtagttg ccaataaacc aatatccaga catcctttta aatctaaagt
16801 tataaattcg gattaccggg gaatatgtca ggagctacgt gaggcgttag gagctgtgca
16861 aaagtatatg tattttatgc gtccagatga tcctacaaac cccagcccgg atacaagaat
16921 acgtgtacaa gaaattgcgg cttacacggc tactggctac gggtggatgt tatggttctt
16981 ggacgttgtg gacgccaggg tatgtcgcca tctcaaactt caatttcgac ggattcgagg
17041 gccgcgcgcg tctgttattc cagatgattt gcttagacga catttaaaaa cgggtcctgc
17101 ggtctcagcg ggcacaggag ttgcgtttat tttagcagca acaactgcca gcgctcttac
17161 tgcgcttttg cgtattagtg tattatggcg aaaggaagag tggcgggatg gtttaaatgg
17221 aaccgcagct gcaattgttg cggcggttga acttattacg cttttgcacc accattttca
17281 atacttaatt aatatgatgc ttattggata tgcatgttgg ggggatgggg gattaaacga
17341 tccttatata ttaaaggcgc tacgtgccca gggacggttt ttatattttg cgggtcagtt
17401 ggtcagaaca atgtcaacac acagttgggt tgtgttagag accagcaccc atatgtggtt
17461 ttcccgggcc gtggcgcaga gtattttagc acatgggggt aaacccacaa agtattatgc
17521 tcaggttctt gccgccagta aacggtatac tccgttacat ttaagacgta tatccgaacc
17581 atcgagtgtg tctgatcagc cgtatattcg ttttaatcga ctgggatctc caatagggac
17641 aggtataggg aatttggaat gtgtctgttt aacgggaaat tatttatctg acgacgtaaa
17701 tgcaagttcg catgtaatta atacagaagc accgttaaac agtatagcac ccgatacaaa
17761 tagacagcgg acttctcgcg ttttagttcg tccagacacg ggtttggatg taactgtccg
17821 aaaaaaccac tgtctggaca taggccatac ggacggtagt ccagttgacc caacgtatcc
17881 tgatcattac acccggataa aggcggaata tgaaggtccg gttcgggatg aatcaaacac
17941 aatgtttgac caaagatcgg atttacgtca catagaaacc caagcatctt taaatgatca
18001 cgtatatgaa aatataccac ccaaggaagt gggttttaac tcatcttcag acctggatgt
18061 ggatagcctt aacgggtaca cctccggaga catgcataca gacgatgact tatcaccaga

18121 ttttataccc aacgacgttc ccgttagatg taaaaccacg gttacgttta ggaaaaatac
18181 gcctaagagt catcattaag tacagcggtt aatagatagt tatggactag gcactttggc
18241 ggtcatttcc acaaccaggt taaaattggg ggatttggga gaaaatagtc tattgcgtat
18301 tttctgttca ataattggac tgcgttattt aaaggtctga ttggttgatt gggttataaa
18361 aggaattact cctttaaatt ttacttaatg tacccacaat atcaagtggt cgtttgtatt
18421 taacgattat taccggtacc atgggagact tgtcatgttg gacaaaggtg ccgggtttta
18481 cgttaaccgg cgaacttcag tacttaaaac aagtggatga tattttaagg tatggagttc
18541 ggaaacgcga tcgaacagga atcggaacgt tatctttatt tggaatgcaa gctcgataca
18601 atttgcgaaa tgaatttcct cttttaacta caaagcgtgt tttttggagg gccgtcgtgg
18661 aagagttgtt atggtttatc cgcgggtcaa ccgattccaa agaactcgcc gctaaagata
18721 tacacatatg ggatatatac ggatcgagca aatttctaaa taggaatggc ttccataaaa
18781 gacacacggg ggaccttggc cccatttacg gcttccagtg gagacatttt ggagcggaat
18841 ataaagactg tcaatcaaac tatttacagc aaggaatcga tcagctgcaa actgttatag
18901 atacaattaa aacaaaccca gaaagccgac gaatgattat atcgtcttgg aatccaaagg
18961 atatcccctt aatggtacta cctccatgtc acacgttatg tcagttttac gttgcaaacg
19021 gtgaattatc ctgccaagta taccagagat cgggggatat gggccttggg gtaccgttca
19081 acattgctgg atatgcactt cttacctaca tagtagcgca tgttacagga cttaaaaccg
19141 gagatttaat tcatacaatg ggggatgcac atatttactt gaatcatata gatgctttaa
19201 aagtgcagct agctcgatcc ccaaaacctt ttccttgcct taaaattatt cgaaatgtaa
19261 cagatataaa cgactttaaa tgggacgatt ttcagcttga tggatataat ccacaccccc
19321 ccctaaaaat ggaaatggct ctttaatgga tttttaaatg ttgtcaagac agtagatgtg
19381 ttgcgaatgt aataaaatga tatacacaga cgcgtttggt tggtttctgt ttatgaacag
19441 caacggatgc atagggttgc gataactgcg ataagaccca atgtcccaag gatagatatc
19501 acaccaatta taactgctac aacggaaaat gtagtggcgt aggtagatgc atcgtaggta
19561 taaacggccg aaaacggagg gaatttttta gggtaaccat ctagatgaca cgaataggtg
19621 ataggtccgt cgagttccga tgttggacaa gaactttgca tgtttacaaa ccgtttgttt
19681 tgatcacaca ccccagtaat ctcactgttt tcgtggttaa tgggagaatc gttaacccac
19741 catacgaaat gtacaacgcc acgtggcaca cattttgccg tacatactat gtgtccatca
19801 ataataccta tagacacgtt gggaaatgga tagacgtcag gggtaacgac agcagaatat
19861 ttcatattag agacgccatc ccgaatccat aaaacattac attggatggc tgggggtggg
19921 taatccattt gtttttgctg tggaattcgt accgccgaaa cataactaaa taatccattg
19981 gcatattctt gtattgcatc ggttataaaa ttttttccga tgttaccaaa ccttgaagtc
20041 caccgaacac gtaccgagtg cggtggataa tactttgata cgttacagta ggctgcgtat
20101 gtctgtccgg ttaagactgg atcgccgaca acggtaatat ttggacgata atacgttgta
20161 actgtaatac tgtgttccga tatgacgttc ttagtttttg tattaacgac tcgccaaata
20221 tacgttccct ccgtggtagc atccatagat aaaattgtta cagaaaaatc agacgttgtt
20281 ttaacatctg gtattacata attttcctta gcgtgtgtaa atatctcagg gttgtttatt
20341 aagtttaaat cggcactgtt gctatataac ataaccggta aatctggcat gcgtattaac
20401 gcattgccca gttgacggtg cggatctata aggtgacgcg taaaccaaac ttcaatatga
20461 agatcggggc gtataagcga cttccacctt gttatatttg aaccttccgg atctaaagaa
20521 tattgttcat atgtttttg ttgctgctta aaggccgcct gttgtccggt cgttagacgc
20581 atgtaacaag gcatgataaa tgtgtgaaaa tagggtatgg attgtattcc gccgtgaacg
20641 cattgtatat tttcatatag aaaaggtggt tgtgaatgtt gggtgttggc tgcgggatcg
20701 ggctttcggg aagcggccga ggtgggcgcg acggcgggat cgggctttcg ggtagcggcc

20761 gaggtgggcg cgacggcggg atcgggcttt cgggaagcgg ccgaggtggg cgcgacggcg
20821 ggatcgggct ttcgggtagc ggccgaggtg ggcgcgacgg cgggatcggg ctttcgggaa
20881 gcggccgagg tgggcgcgac ggcgggatcg ggctttcggg aagcggccga ggtgggcgcg
20941 acggcgggat cgggctttcg ggaagcggcc gaggtgggcg cgacggcggg atcgggcttt
21001 cgggtagcgg ccgaggtata taattcagtt atacttacgg gtgtgggttg agattcagtc
21061 gataattgta tacacgcgat cgttaaaatt aaatttattt gtatccgctt catcctggtt
21121 tttattgaca catccacgct ccccttaaat aaaagattaa aacacccacc gcggaattta
21181 aatgatggaa acgtttttt cgacattggg aataataaaa acggcttttg caactttaaa
21241 aactttattt atctcgatta cgatacatat gtaccacata gatagcatag atttattata
21301 atataaacac acacgtgata tactttagtg atatgagatg ccataaaaca gtcaataggt
21361 ttaacgctta gtctcatcat ctgaatacac gtcaaacccg ccgcaactgt tgatgttaga
21421 attataatag ctccccatga aatgccggca aatgttacag ctatacccgt caccgaggtc
21481 gttgtatata atacaattac ccataggttt tttttttctt gatataaaac ggcaaaaccc
21541 tgtaacccaa atgctataat atgacctcct attgaaactg ctaacgttac ttgtgtaagt
21601 ttgataaaat gatttaattt aattatatgt gagattgccc acattaatgg ggtaactata
21661 tataacaccg ggggtataac agacattata cgaattcctt taaacacgcg tttaagggtc
21721 cgggaacttt ctcgatggtc acatactctc ccgcggtcat tttgtgtata tacaacggca
21781 aaacctaaat ctgtataagt gtttaattgc ttatggcgat ttttacgata tatacacgta
21841 tcttgcaaat cggtggcggc atcgacaatt gaaactagtg tgacaataga tatacacaat
21901 ccaataagaa cctcatattt actgacatac atatataaaa taacggttag taaacctccc
21961 aacccagttc ccaacatcat aacataaaaa taaatatgcg gtccattgaa tgtcgtaaca
22021 aagttgtagt aatggatatg cacagcagcc actgttccgg taatcgcgga tatggaaatt
22081 cccagtaatt ctacaaatgg aagatcccgg gatattgggc aaccaaccgc ccataacaca
22141 gcaaaaccca acacgaccac cgtctgcaaa catcgtccca attttgctaa tgtgcgtaga
22201 aatttcacgg atgttggcca taaccccgaa acgacgatca accccataat agttgcattg
22261 acggcagctt cgcagacgtg atattgtaaa attaacccgg acgtgataac gcttgcttgt
22321 agtcccacga gaaacaaccg cgatgctgag gttattgcac acgaattaca ttcttgaggg
22381 tttccgacac atccttggat tgattgagcg cggattaatt ctctgtctaa cacacccagg
22441 ttttcatcat ggacagctct ttcaccattc acggccatgt cttaagttta ataattcaaa
22501 acaaataaaa atgtgttcat ctatggtaca cacaagtttg tatgtaaaat ataagcaaaa
22561 gttgcactta tttaactgta catattacgt cagattcacg tgataattca gaataatcca
22621 gggttcctgc agggtccact ggaggagcca cacaatattc gcgaattccg attccctcct
22681 gccatgtggt ttcggggagt ttccccccca ttttatttcc ggtatttttt tcgtttcttt
22741 ttgttaataa attgcgtctt ttttttaatg gtggttcatc cttcacagat tccatgttcg
22801 caaataattg catcgaggtt aatttttctt taaggtcttt gggacttaag aacgttgcat
22861 aaaaaaaaga atgcacgggt gcggaacgtt ggatatacaa tccaaccatg ggggagttag
22921 ttaaggcgag ataaaaatta atataacacg tctcatcccg tgttaactta agattttgta
22981 cggcagaacg gaatccactg tgtgtttcca ataatactcc aaattcacgc atactcccgc
23041 tgccataaac aacattatta aggatccttt ttgaatttgt gattgagcgt attaaattat
23101 atggtgtagg cttgcttccg tttatatcca aggaaacatt aaatgagata aaaccacccc
23161 cggcggtctg gatgtacata tccgtggctg ttagaatgaa gcatgttgta aacccaaaag
23221 ttttaagtag tcgctgtaaa cgggtgaatt gatcgcgttt taagcaaatg cttatatctg
23281 gagttagatt tggaaacatc attgtataac aagcgagttc acgttttaca acttgtttgt
23341 aacattgtac ttgatcatct ggaccacaat cacccgggcg ttgccatacc atcgtttgga

23401 taatactccg ctcgggggggt tgtccggtaa atttaaaata taaccgtgtt ggggtcgacg
23461 gatcttttgt atggcgaaac gcgtcaataa gcgaggaccg tccctccgtt gccgcgagta
23521 caaccattct cggcccagtc caattatact ggtcaaacat atttgccggt ataggaatat
23581 acagttgttc tgtttccaaa ctacagtgaa taattaatcc ttcgtcgctg aatattaaaa
23641 tagaatccct tagtctatta accagaggtg atatagacga aattaaacca gtaagcgttt
23701 tttccgttaa aacagctctg gcgatttctg gggcgtcaaa acccgcatgc aattccatgt
23761 ccaaagcatc gtctgtacgc gacctcaaat ccataattta ctacttaaaa tgtttactat
23821 agaaaaagta atcatatgta aacacacgag tttcgttaat atgtttgttt aacccgatcc
23881 ggtgacttaa gtacataaac aggcatgata tttgaatagt acggcccatg ggagggaaca
23941 tttccacgtg ttccaataca gggggtgttc cttaataggg actgtgcaat aaaatacgta
24001 agaagttacc agatttgatg taatgtttgt cataaaaaat atgtacatca ttatatacgt
24061 ctgtaattaa cacaagatca catcgaagaa ttactgaagc cgctgtgaaa cctttcacaa
24121 gacgatataa acttggttaa gtgtattgat ggggctcttt ggactgacac gctttatcca
24181 tgaacataaa ctggttaaac ccagcatcat ttcaacgcca cccggagttt taacccccgt
24241 ggcggtagac gtatggaacg tcatgtacac attgttggaa cgtttatacc ctgtgggtaa
24301 acgcgagaat ttacacggac catctgtaac gatacattgt cttggagtct tattgcggct
24361 attaacacaa cggtcatact atccgatatt tgtattggaa cgttgtacag acggcccatt
24421 atcacgtgga gccaaggcaa ttatgtcacg ggccatgaac cacgatgaaa ggggaacctc
24481 ggacttaacc cgtgttctac tatcatccaa cacatcatgt tctatcaagt ataacaaaac
24541 atcggaaaca tatgacagtg tgtttcgaaa ctcttccacg agttgtattc ctagcgaaga
24601 aaacaaatcc caggatatgt ttttggacgg ttgtccacga caaactgaca agacgatctg
24661 cctgcgcgac caaaacgtat gcagtcttac ctctacaatg ccatcccgag gacatcctaa
24721 ccatcgatta tatcacaaat tgtgtgcaag tcttattaga tggatggggt atgcatacgt
24781 cgaggcggtt gacattgagg cggacgaggc atgtgcaaac ttatttcata cgcgtacagt
24841 ggctttggtt tatacgacag atactgattt actcttcatg ggctgtgata ttttgttaga
24901 tgcaattcct atgtttgctc cagtagtacg atgtcgcgat ttgcttcaat atttaggaat
24961 tacataccct gaatttttgg ttgcctttgt tcgctgtcag accgatttgc atacaagtga
25021 caacctaaaa tctgttcagc aagttattca ggataccggc ctgaaagttc cacatcaaat
25081 ggacacttca acgcgctccc ccacttacga ctcgtggaga catggcgagg ttttcaaaag
25141 tcttaccgta gccacgtcgg gtaaaacaga aaacggagtg tccgtttcca aatatgcatc
25201 taaccgatcg gaggtgacag tagacgccag ttgggcttta aaccttctgc caccctcatc
25261 ctccccattg gataatttgg aacgcgcatt tgttgaacat ataatcgccg tggtaactcc
25321 attgacccgc ggtcgcctaa agttaatgaa acgtgtaaat attatgcaaa atacggcaga
25381 cccatatatg gttattaaca ccttatatca taacttaaag ggggaaaaaa tggctcgcca
25441 atacgcacgt atttttaaac agtttattcc tactccactc ccactaaaca ctgtattaac
25501 aaaatattgg aattaaaaca cacataagag cgacttaatg gttcattgtt ttattttgct
25561 cgtatataca tgttataaat cgtttatcac tgtgcccgca taagatgtac tgtgtctctc
25621 aaaaaaattt gtgtttttat ctgcaatcat aaatgcaagt ggaaagtccg aatcgggagg
25681 tggggtgtta aatagttttg gtacattaat cgctgataaa agcctgtccg cgctgaattt
25741 cacgtattgt gtaattgcat cgacgttcac caaacgggtt ttgggtgcat gggatttaa
25801 aaacgcacac tcgatttcaa cggcttccga aaacagttga tgtattctgg tgatagcggg
25861 tttttcgggt acatagttat tgtatataca acacgatgcg ctggtatgta tggcttcatc
25921 tcggcttata aggtcgttaa attgacaagt tacaacaaat agtccgttat tgcgtaaata
25981 tgcaatagcc gcgaacgatg atacaaaaaa aatgccctct ataagaatca ttagtatata

26041 tttttctgca acggatgggt tgtcccgtac cttttcttcc aaccattgta ctttttgttg
26101 gatcgacgga ttattaatag tgacatttac gtattgtacc cgcaacgatt catcccctct
26161 gaacaacatt agttgaattt gactatagac acgcgcgtgg acaacctcga tgcactcttg
26221 ttcaatgtag taatggtgaa tatccttttg ggaaaagagt tgggttagag agcccaaatt
26281 aacatttacc agatcatctg ccgccgataa aaatgtaaaa ataaatctgt agaatattag
26341 ttcatcttcc gttaaacagt ccaagtattg ataatcatct tcaatgataa aatcgctttc
26401 taaccaacga ttcgaaatgc tcagggcacg taaattgttt atatctggac actccggcct
26461 gtaaaaaaaa tgactgcaat ctttctgatc cattttggaa tagtttcccg tgtaaattta
26521 taaagcacaa ctggtacagg ttaattcgcc tcccgcaaac agtccgctgt tcgtagcttt
26581 acgaatttta cagtagtaca tacccgtttt aaggccggct ttataggcac gtataagcaa
26641 attcattatt ttggaggcgg gaattgtccc gtctgggcgt tcctcaataa ataaagtcat
26701 tgattgactt tggtcaataa atggcgccct ttctgcacac atatcaacga gatcctcttg
26761 ctcatattca aacgctgttt tatattttaa gagtgggtga ctattagata aacagccaaa
26821 cgaacgtatt actgaccatt ggtttttctc aagtatgttt ataacttcca gtcgtttttc
26881 ttcacatgaa tacatatctc ttagttcgtc cataaggtct aagttgggtc taagtaactc
26941 acccgaggtg gtgaccttac taaacatatt attataaatt ggagagaaac cctcactgca
27001 ctccgttacc tgtgcagatg aaactgtggg cattaacgct aagaactgcg agttgtataa
27061 cccataagcg caaatatcat ctcgcagggt acaccatggt aaatctaaat aacttatcgt
27121 agaaaaccca tcttggtgta accatccctt agcatattta ctttcggtaa aacccttaaa
27181 cggggctaag ccgccaatct tacacatttc catgcttgtt ttcattgtct catacaacat
27241 taactccgct atttgtacat ttaaccgtct agctggttgg gaagttaaat caaatcctaa
27301 gcggagacaa gttgtatgta acccttgtat gccaatgcca agtgatcggt tgtttttttac
27361 acctttacat gatttttac atggaaagtt cccagccgcc aggaccccgt ttaaaaaaat
27421 aacagtcgtt cttgctgtca attgaaggtc gtttaaatta aatgacactg ggcctttgga
27481 taagcacgtt gtaagattta tgctggcaag attacatacg ccatgttgat gagcgtctgc
27541 cttttgaaca atttccgtac acaaatttga ccccgtgata gcatttcctt gggtattcat
27601 atgataatta cgattacagg catctttgaa cattaaaaag gggcttcctg ttacagcagc
27661 actgcgtatg attgtgaatg cgatatcttg aatgggaaca gaagaaacgc ctaatccttc
27721 tctctctaaa cgtaaatagg ttgaagtgaa tgcctccccg tgtaatgttc gaaggatatc
27781 ggctctgtta tcaaaaagag tccactgaac attactagcc ccttttagat agcttaggta
27841 tctttcaaaa aataaatctg gggtccataa acaacaaaat atgttatcac atcgaaatat
27901 ttcatcacga accaacattc cacgtgtggc caaaacagtt tgtagatcga cgtgccatgg
27961 ttctatgtaa acacaaactc cagttggtcg ttcacaatca ctgttaattg ccataaccat
28021 gcaatctaaa agttttaaaa ctgcaagaag acctttcgtt tgattttccg taggtattaa
28081 attcagactc tgtagagaaa ttcccactcc acctcgactt tgtaataccg ttcccacatc
28141 gcctgtgata gctcgaacag ctctcccaac agtgatggat tccgggtcca ttaaataaca
28201 actggccgtt gccccggtct ctcgacctaa aaacatcata accggtgtag ccgggacaat
28261 tttctgacat gccaacgctg tgaaaaatac ccgacagaca tcagtccatg tataaccatc
28321 atttattccg ggaataagag ttgcgatttt aggcaggttt acgatttctg ttgtcacggt
28381 ggccgccagt cttaaaaaga attggcaaag cgactctaat ttaccttcct ctaacttagt
28441 taaataaaag tcttcgtact ttaaagcaga ctgtagtcca agggtagcta aagcggggta
28501 ttgatctttc aaaaacggtt ctaatatagc ccgacgaatt tcgtccctcc gcccttcaat
28561 tgcttggcgg actcggggag ttaaacagag aattggggaa gtcaaccacg tttccatgga
28621 aacggatcgt aggttaatac ggcaatggat aagttctcca caacatcggt acactcgctc

28681 atcttgtcgc gtcaccgcct taagttttga gacgatagtg ctaatatact ccattaattc
28741 caccggtgtg gttgattcgg gcggaatgat gtattccttg tagccatgtt gacataatcg
28801 gtttataatg tcatgaaccg tattaaaaat tcttttgaac tccataacgg ataacgtatt
28861 taggctccgg aataaacctt taaaccctaa actcacagct gagttagttc tacaatattg
28921 tagactccct tatatatggt tacgtacagc ctgcccctcc ccagtatata atatcacgca
28981 aaacccacgc tatgttaaat tcagtttatt ttacatacat gctttaataa taacattcgt
29041 tccatgtatt tgtacccccc cacacaaccc cctctaacca aatagttggc acgttataac
29101 ctccgaaccg ttccatgcgt cttgtataac gcacagactc tgatggaatt gttccaatta
29161 acgtatatgc cgcatacatg caggataatt gtgtgggaag tccccgaaaa tcgccggtcc
29221 attgatacaa tcgctgtcta gccaagttcc aatttactcc tgtaatttcg ccaatactac
29281 atcgagggct tgtcgggtca ttggataact gcacaagcgg caacgccctt gtgttatatg
29341 gctggtgggt atttgcaacc ccttcagtcc cccaggcggc attttcagct cgtatgcgtc
29401 ctaacaggaa gccaatacca cgaccaaaac attgttcgtt tagttggctt aatgcaagat
29461 gcagtcttac accttctcgt tggcgtcgct gtgtatatac aaaaaccaag aacacatgct
29521 tcagtccgtc cgcggaaaga tgtaaatctt tgtcaacgtc ccaaaatacg caggccggga
29581 tgttggctgt gaccctgcga gttgaagttt tgtctgtacg tgcagcttct tggggacctt
29641 tggccacggc ggttatattg cataaattat cctgaatggt atattccagc agggacccaa
29701 aaaaacttat aaatcgatgt ggaaatacat gacattgtac catcgcacgt aaacactccg
29761 aaaaccttat gagccgcgtt tccatacgac tgcatccata ggcagaaaca attgctgttc
29821 tgttggcatc cgctgcctgt ttatccgtat attcttctgc ccggcatgcg gcgatgaaac
29881 ttaatgacgt tacatatgct ctaagccccc caccttctcc aacggtccaa ggagccgtgc
29941 aggcattgaa taggtttcgt aaaccctcta gtagtacatc ggggtcacgt ccagcctgtg
30001 taagtgtatt agcttctcca atcatgtcag atggatgacg aaggattaag acgattgacc
30061 cagcatgctc aatgtccgga cgaaaaaaat cggttaatga cacttgttgg attagctgtg
30121 tcgttgattt aaaattattt aacgggagtc taatggtaac ttgcgggtta ccaattgaag
30181 ttggatttat ttgaatgttg ttcatacgat taataacaat tgaacggggg gttacttgaa
30241 tagacgcggt ttctgtacgt tttggtggta catgtatcgg ttgtttgttc agacctccaa
30301 agcgagggcc aattgttaaa tcgcgactcc aatttccgaa gaagcccgga gcataagtca
30361 tatgaagccc gttccctatt tgaataaaac ggttatttcc taaaagactg atattagttc
30421 cacatagcgt ttgttcgttt aaagtaaaat gcgagttggt tggttgactc cccatagctg
30481 aggggttaaa ttcacacaat gcaatcgtga cgtggtacta tctgaaatgt tgcctggggt
30541 atgtgtacac attatacagt cgtagtaccg tttatataat gttaggtagg aggagcctat
30601 aaaaatattt tgattggcgt taaaaggttc ttcaacttac cgtgacgtcc tttttattaa
30661 catgcgtttt tattgatgtt acatttatgt cttttcattc cggacggatg tagctttttc
30721 atatcacgtt ataaagttaa gtcagcgtag aatataccat ggaagaacca atttgttatg
30781 atacacaaaa acttttggat gatttaagta acttgaaagt acaagaagcg gacaacgaaa
30841 gaccatggtc accagagaaa acagaaatcg ccagagttaa ggtagttaag tttttacgat
30901 ctacccagaa aattccagct aaacatttta ttcagatatg ggaacccctg cattctaata
30961 tctgttttgt atattccaat acatttttgg cggaggctgc tttcacggcc gaaaatttac
31021 ccggactgtt gttttggaga ctagatctag actggacgat agaggagcca ggtaatagct
31081 taaaaatttt aacccagcta tcaagtgtag tacaagattc cgagacgtta catcgtttat
31141 cggccaataa attacgaacc tcgtctaaat ttggacccgt ttcgatacac ttcattataa
31201 cggactggat aaatatgtac gaggtcgcct taaaggatgc aacaacagcc attgaatcac
31261 cattcactca cgctcgtatt ggaatgttgg aaagcgccat tgcagcttta acacaacata

31321 aatttgcgat catttacgat atgccatttg ttcaagaggg gattcgtgtt ttaacacaat
31381 atgcaggatg gcttcttccg tttaatgtta tgtggaatca gattcaaaat agctcactca
31441 ctcctctaac acgagcccttt tttataatct gtatgattga tgaatatctc acggaaacgc
31501 cagtacatag catatcagaa ttatttgcag atactgtaaa tttaattaaa gatgaggcgt
31561 tcgtatccat cgaagaagcg gtaacgaatc cacgaacggt gcacgagtca cgaatttcct
31621 cagctctggc ttatcgagac ccttatgttt ttgagacatc cccgggaatg cttgctagga
31681 gacttagatt agacaatggt atatgggaaa gcaacctctt atcgttgtcc acccccggaa
31741 ttcatattga ggcgctgtta catttactaa actccgaccc ggaagcggaa accacatctg
31801 gaagtaatgt agcagaacac acccgtggca tttgggaaaa ggttcaggct agtacatcgc
31861 ctagtatgtt aataagcacc cttgccgaat ccgggtttac aagattttca tgcaaattgc
31921 tacgtcggtt tattgctcac cacacactcg ccggttttat tcacggaagc gttgtagcag
31981 acgagcatat tacagatttc caacaaacac taggatgtct cgctttagtg ggtggactgg
32041 cataccaatt agtggaaacg tacgctccta ctaccgagta tgtgttaaca tatacacgga
32101 cagtaaacga gaccgaaaaa cggtatgaaa cgctattacc cgccttagga ttaccaccgg
32161 gaggcctggg acaaattatg cggcgctgtt ttgctccacg acccctttatt gaaagtatac
32221 aagcgacacg cgtaatacta cttaatgaaa tttcacatgc agaagctaga gagacaacat
32281 attttaagca aacacataat caatcctcag gtgcgttatt accacaagca ggacaaagtg
32341 ccgtacgcga agccgtacta acctggtttg acctacgtat ggattcaaga tggggtatta
32401 ctccccccggt ggatgtgggt atgacacctc ctatttgtgt tgatccaccg gctacagggt
32461 tggaagctgt catgataaca gaagcactaa agattgcata tcctaccgaa tataatcgct
32521 ctagcgtgtt tgtggaaccg tcgtttgtgc cttatattat tgcaacaagc acgcttgatg
32581 ccctttcggc aacaatagct ttgtcttttg atacacgggg aatacagcaa gccttgtcta
32641 ttcttcagtg ggctcgcgat tatggatccg gaaccgtgcc caatgcagat ggatatcgca
32701 caaaactatc tgctcttata acaatattag aacctttac ccgtacacac cccccagtac
32761 ttttaccatc tcacgtttct actatagatt cccttatatg cgaacttcat cggactgttg
32821 gcattgccgt tgacctgctt ccccagcacg tccgtccttt ggttcctgac cgtccttcta
32881 ttacaaatag cgtttttta gcaactctct attatgatga actttacggt cgttggaccc
32941 gactggataa aacatcgcag gcgttggttg aaaattttac atccaacgcg ttagtggttt
33001 ctcggtacat gttaatgtta caaaaatttt ttgcgtgtcg tttttatcca acgccagatc
33061 ttcaggctgt tggtatctgt aacccaaagg ttgaacgcga tgaacaattt ggggtatggc
33121 gtttaaacga tcttgctgat gcggttggtc atattgttgg gacaatacaa ggaatccgaa
33181 cgcaaatgag agtgggaata tccagcctgc gcacaattat ggccgatgct tcctcagccc
33241 ttagggaatg tgaaaattta atgactaaaa cctccacttc tgctattggg cctcttttttt
33301 caacgatggc ttcccggtat gcacggttta cacaggatca aatggacatt ttaatgcgtg
33361 ttgacaaact aacaacagga gaaaatatac ccggtcttgc aaatgtagag attttttttaa
33421 ataggtggga acgaatagca acagcttgta ggcatgccac ggcagtcccg tcggccgaat
33481 ctattgcaac cgtgtgtaat gaattgaggc gcggtttaaa aaatatacaa gaggatcgtg
33541 taaatgcccc aacctcatat atgagtcacg cccgaaatct ggaagatcac aaggcagcag
33601 tttcattcgt tatggactcc aggcaacagt ttattgtgga ttctggacct cagatgggcg
33661 cggttttaac ttcacaatgt aatataggaa catgggagaa tgtaaatgca acgtttttac
33721 atgataatgt taaaataacg acaacggtca gagacgtaat ttcagaggct ccgacgctga
33781 taataggaca aagatggctt cgtccagatg agattttatc taatgtagat ttgcgtcttg
33841 gcgtacccgg gaatacaagt gggagtgacc cttaatataa aacaggcgtg tttatgtaca
33901 ttaaagtatt tgtggttttt attgactggg cgtttcgttt gtataacgct gttgttgcta

33961 gtattttcat aacctcctag gtttttggag ctacacgtgc ttattcaacg ctctttggga
34021 tttgaatcat cgtaaacgta gcgtccctac cagttgagcg cgtaattttc gtaagcaata
34081 aaatggatat aattccgcct atagctgtca ctgttgcggg agtgggaagc cgtaatcaat
34141 ttgacggtgc cctgggaccg gcgtcaggtc tgtcatgttt aagaacatct ttatcgtttt
34201 tgcatatgac atatgcgcat ggaattaatg caaccctgtc atcagacatg attgatggat
34261 gtttacaaga gggtgcagca tggactacgg atctgtctaa tatggggagg ggtgtcccag
34321 atatgtgtgc tcttgttgat ctccccaatc gaatttcata tattaaactg ggggacacta
34381 ccagtacgtg ctgcgttttg tctagaatat acggcgatag ccatttttt accgttccag
34441 acgagggttt tatgtgcaca caaattcccg ctagagcgtt tttcgatgat gtgtggatgg
34501 gacgtgaaga gtcgtataca attataactg tagactcaac gggaatggcc atctatcgtc
34561 agggaaacat atcttttatt tttgatccac atggccatgg gactatagga caggctgtag
34621 ttgttcgggt gaataccacg gatgtgtact cttatatcgc atcggagtat acccaccgcc
34681 ccgataacgt agaatcccaa tgggccgctg cattagtttt ttttgtcacc gcaaacgacg
34741 gtcccgtaag cgaagaagcg ctatcttcgg cagtaacgct tatatacgga agctgtgata
34801 catattttac agatgaacaa tattgcgaaa aactggttac agctcaacat ccgttgcttc
34861 tttcacctcc taattccacg acaattgtgc ttaataaatc gtctatagta cctcttcacc
34921 aaaacgttgg tgaaagtgta tccttggaag caaccctaca ttcaacgtta accaacacgg
34981 ttgcactgga ccctagatgt agttacagcg aggttgatcc ttggcatgcg gttctagaaa
35041 caacctcgac tgggtctggc gttttggatt gtcgtcgtag acgccgtcct tcatggactc
35101 ctccttcaag cgaggaaaat ttagcttgta tcgacgatgg cttggtaaat aatacacatt
35161 ccacggataa tttacataaa cccgctaaaa aggttctcaa atttaaacca actgtagacg
35221 tgccggataa aacacaagtg gcacatgtat taccccgcct acgagaagtt gctaacaccc
35281 cagacgttgt gttaaatgta tccaatgtag atacgcctga atccagtccc acttttttcac
35341 ggaacatgaa tgtaggaagc agtttgaaag atcggaagcc atttctattt gaacagagtg
35401 gtgatgtcaa catggttgtc gaaaaactac tacaacatgg gcatgaaatt agcaatggat
35461 acgtacaaaa tgcggtgggt acgttggata ctgttattac cggtcataca aatgttccca
35521 tttgggtaac aaggcccttg gttatgccag acgaaaagga tccattggag ctttttatta
35581 acctcaccat tttgcgttta acgggatttg tggtggaaaa tggaacacgt acacatcatg
35641 gtgctacaag cgttgtatca gactttatag gtccccttgg ggaaatttta acaggatttc
35701 cctccgccgc ggaacttata cgcgttacaa gtttgatatt aacaaacatg ccgggggcgg
35761 aatatgctat taaaactgtt ctccggaaaa aatgtacaat tggcatgctc attatcgcta
35821 agtttggtct agttgccatg cgggttcagg atacaaccgg cgctttacat gccgaactag
35881 atgtgttaga agcggatcta ggaggttcgt cgcccataga cctctattct agactgtcga
35941 caggtcttat aagtatacta aattcgccta ttatttctca tcccggactt tttgccgagc
36001 ttattccaac ccgtacaggg tccctgtctg aacgaatacg tcttctttgt gaattagtct
36061 cggcccggga gacacgctat atgcgtgaac acaccgcgct tgtttctagt gtaaaggctt
36121 tagagaatgc attacggtct acccgcaata aaattgatgc cattcaaata ccagaagttc
36181 cccaggaacc cccggaagaa accgacattc cacccgaaga gttaattcgg cgtgtatatg
36241 agatacgatc cgaagttaca atgctattga cctcggctgt tacagaatac ttcacccgcg
36301 gagtgttata tagcacacgg gccttgatcg ctgaacaatc ccctaggcgt tttcgggtcg
36361 cgaccgcaag tacggcaccc attcaacggc ttttagattc tcttccggaa ttcgacgcta
36421 aattaacggc aatcatatcg tccctgtcta tacaccctcc tcctgagact atacaaaatc
36481 tccccgtcgt atctctgtta aaagagctta ttaaagaagg ggaagattta aacacagaca
36541 cggctctcgt atcgtggtta tctgtagtcg gggaagctca aaccgcaggt tacttatcca

36601 gacgagagtt cgatgaatta tcacgtacaa ttaaaaccat taatacacgc gcaacgcaac
36661 gggcttccgc ggaagcagag ttgtcttgct ttaatacgct aagcgcggcc gtagaccaag
36721 ccgtaaagga ctatgaaaca tataacaatg gtgaggtcaa gtatcctgaa ataacacggg
36781 atgatttatt agcaacaatt gtacgtgcta cagacgattt ggtgcgacag ataaaaattt
36841 taagtgatcc aatgatccaa tccggtttac aaccttcgat taaaagacga ttggaaacaa
36901 ggcttaaaga ggttcagacg tatgcaaacg aggcccgaac cacacaggac acaataaaga
36961 gtcgaaaaca ggcggcatat aataaactcg gggggttact tcgcccggta accggttttg
37021 tgggacttag ggctgcagta gatttattac cggaacttgc ttctgagtta gatgtccaag
37081 gagccctggt aaatctcagg accaaagtct tagaggcgcc ggtagagatc cgttctcaac
37141 ttacgggtga tttctgggcg ttatttaacc aatatcgaga cattttagaa catcccggaa
37201 acgcacgcac atctgtctta ggaggactgg gagcttgttt tacagctatt atcgaaattg
37261 tgccgatacc tacggagtat agaccatcat tgcttgcgtt ttttggtgac gtggcagatg
37321 tgcttgcatc cgacatcgcg accgtatcta ctaacccgga aagtgagtcc gccataaacg
37381 ctgttgttgc aactcttagt aaagcgacgt tagtttcatc tacagtgcca gccttatcct
37441 ttgtgttgtc gttatataaa aaatatcagg ctttacaaca agaaattacg aatacccata
37501 agttgactga attacaaaaa caacttggag atgacttctc caccctagct gtctcatctg
37561 gacacttgaa gtttatatca tcttcaaatg tagatgatta tgaaataaac gatgcgatat
37621 tatcaataca aacaaatgtg cacgccctaa tggatacggt taaacttgtt gaagttgaac
37681 tgcaaaagct acccccccat tgtattgctg ggacatctac cttatctcga gtagtaaagg
37741 atcttcataa actcgtcaca atggcacatg agaagaagga acaggcaaaa gtgttaatta
37801 ccgattgtga acgtgcacat aaacaacaaa cgactcgggt tttgtatgag cgttggacac
37861 gtgatattat agcatgtctg gaggcaatgg aaacgcgcca tatatttaac gggacagaac
37921 tggcacggtt gcgagatatg gccgctgcgg gagggtttga tatacacgca gtttacccac
37981 aagcacgtca ggttgtagcg gcatgtgaaa ctacagccgt tacggcatta gatactgtgt
38041 ttcgccacaa tccatatacc cccgaaaata caaatattcc accacctttg gctttgttaa
38101 gagggttaac atggtttgat gatttttcga ttacggctcc cgtattcacc gttatgtttc
38161 caggtgttag tattgaggga ctccttctgc ttatgcgtat tcgcgcggtt gtgttattat
38221 ccgccgatac gtctattaat ggaataccta actaccgaga tatgatatta cgaacctcgg
38281 gggatctatt acaaataccc gcattggctg ggtatgttga tttttacaca cggtcttatg
38341 atcagtttat aaccgaaagt gtaacgttaa gtgaacttag agcagacatc agacaggctg
38401 ccggggctaa acttacagaa gcaaataagg ctttggagga agtaactcat gttcgggcac
38461 acgaaacggc taaacttgca cttaaagaag gtgtcttcat tacattacca agcgaaggtt
38521 tattgattcg ggctatagag tattttacaa ctttcgatca taaacgattt ataggaacgg
38581 catatgaaag agttttacaa acaatggtag accgcgatct aaaggaggcc aacgcagagc
38641 ttgcacagtt tcgtatggtg tgtcaggcaa caaagaaccg tgcaatacaa attttacaaa
38701 acattgttga tacggccaat gccactgagc aacaagaaga cgtggatttc actaacctga
38761 agacgttatt aaaactaacc ccccctccca aaacaattgc attggccatt gatagatcta
38821 cttccgttca ggacattgtc acgcagtttg cattgctgtt agggcgtctg gaagaagaaa
38881 ctggtacgtt ggacattcag gcggttgact ggatgtacca agctcgcaat attattgact
38941 cccatccact aagtgtgcgt atagacggta ccggcccccct gcatacttat aaagataggg
39001 tggataaact ttatgcgtta cgaactaaat tagatctcct acgacgacga atagaaaccg
39061 gtgaggttac gtgggacgat gcatggacaa catttaaaag agaaacgggg gatatgttgg
39121 catcgggggа cacgtacgct acttccgtag atagtataaa ggcactccag gcatcggcgt
39181 ctgtggttga catgctttgt tccgaacccg aatttttttt attgcctgtg gaaacgaaaa

39241 accgtctcca aaaaaagcaa caggaacgta aaacggcgtt ggatgttgtg ttgcaaaaac
39301 aaagacagtt tgaagagacc gcgtctcgct tacgagcttt aattgaacgt attccaacgg
39361 agagtgacca tgacgttctt cgtatgttat tacgtgattt cgatcaattt acacatttgc
39421 ctatatggat aaaaacacag tatatgacat ttcgaaattt actcatggta cggttaggct
39481 tgtatgcaag ttatgctgag atttttccac ccgcgtctcc aaacggagta tttgctccta
39541 ttcccgccat gtcgggtgta tgtctagaag accaatcccg atgcattcgc gcgcgggtgg
39601 ccgcgtttat gggggaggcg tctgtggtgc aaacgtttag ggaagccaga tcttctatag
39661 acgctttgtt tggaaaaaat ttaacctttt acttggatac tgatggggtt ccacttcgat
39721 atagagtgtg ttataaatca gttggggtta aacttggaac catgctatgc agtcagggtg
39781 gattatcttt acgaccggca cttcccgatg aaggtattgt ggaagaaact acactatcgg
39841 cattacgcgt ggccaatgag gtcaatgagc tacgcattga atacgaatcc gctataaaat
39901 ccgggttttc tgccttttcc acctttgtta ggcatcgcca cgccgaatgg ggtaaaacca
39961 acgcacgcag agccattgca gagatatacg ccggccttat aacaacaaca ttgacacgac
40021 aatacggggt tcattgggac aagcttattt attcttttga aaaacaccac ctaacttctg
40081 taatgggcaa tggactaact aaaccaatcc agagaagggg tgatgtacgc gtattagagt
40141 taaccctatc tgatattgta actattttgg ttgccacaac cccggtacat cttctcaatt
40201 ttgctagatt ggatttaatt aaacagcatg agtatatggc ccgtaccctc agacccgtaa
40261 tcgaggccgc atttagaggt cgtttactcg ttcgctcatt ggatggagac ccgaaaggca
40321 atgcccgggc ctttttttaat gccgccccat ccaaacataa actcccgtta gctcttggat
40381 caaaccaaga tcctaccggc gggagaatat ttgcatttcg gatggcagat tggaaacttg
40441 ttaaaatgcc acagaaaata acggatcctt ttgcgccatg gcaactttcc ccccccccg
40501 gggtaaaggc caatgtcgat gcagttaccc gtataatggc aacagatcgt cttgcgacca
40561 ttactgtact tgggcgcatg tgtctcccgc caatttcctt agtgtcaatg tggaatacgc
40621 tgcaaccgga ggaattcgca tacagaacac aagatgatgt ggacattata gttgatgcga
40681 gactggattt gtcatccacg cttaatgcaa gatttgatac cgctcccagc aataccacgt
40741 tagagtggaa tacagaccgt aaagtaatta cagatgctta tattcaaacc ggggcaacga
40801 cagtttttac agtaacgggg gcggcaccaa ctcacgtttc taatgtaaca gcgtttgaca
40861 tagcaactac ggctatttta tttggggctc ctttggttat tgccatggaa cttacatccg
40921 ttttttcaca aaattccgga cttactttgg ggttaaaatt attcgattcc cggcatatgg
40981 ctacagattc gggtatatcc tcagccgtat ctcccgatat tgtttcttgg gggttacgtt
41041 tactgcatat ggatcctcac ccaattgaaa atgcatgttt aattgtccaa ctagaaaaac
41101 tgtccgcgct cattgcaaac aaacctctta caaacaatcc cccgtgttta ctgctattgg
41161 acgaacatat gaatccctct tatgttttat gggaacgaaa agactcgatt ccagctccgg
41221 attatgtggt cttttggggg ccagaatctc ttattgattt gccgtacatc gactccgatg
41281 aggactcttt cccctcgtgt cccgatgatc cattttactc gcaaattatt gccggttatg
41341 cgccccaagg ccccccaaac ctcgacacaa ctgattttta cccaacggag ccactattta
41401 agtctcccgt tcaagttgtt agaagttcca aatgtaaaaa aatgcccgtc cggcccgcgc
41461 agcccgcgca gcccgcgcag cccgcgcagc ccgcgcagac cgtccagccc gcgcagccca
41521 tagaaccggg cacacaaata gtggtacaaa attttaagaa accccaaagc gtaaaaacaa
41581 cccttagcca aaaagatatt cccttgtatg tggaaaccga atcagaaacg gctgtgctta
41641 tacctaagca attaaccacc tccattaaaa caaccgtttg taaaagtatt accccaccaa
41701 ataaccaatt gtcggattgg aaaaataatc cacagcaaaa ccaaacgtta aaccaagcgt
41761 tcagtaaacc aatacttgag attacctcca ttccgacaga tgactcgata tcttaccgga
41821 cttggattga aaaatcaaat caaacacaaa aacggcatca aaatgaccct cgaatgtata

41881 actccaaaac agtattccac cctgtaaata accaattacc ttcttgggtt gacacggcag
41941 ccgatgcccc ccaaacggac ctattgacaa actataaaac aagacagccg tcgccaaact
42001 ttccgcggga cgtacacaca tggggcgtat cttctaaccc gtttaactca ccgaacagag
42061 acctatatca aagtgatttt agtgaacctt ctgacggcta tagcagtgag agtgaaaatt
42121 ctatcgtact aagtctcgac gaacatcggt catgtcgcgt tcctaggcac gtacgcgttg
42181 ttaatgccga tgtagtcacc ggtcgacgtt atgtccgagg gaccgccttg ggagcactgg
42241 cactgttaag ccaggcatgt cggcgtatga tcgacaacgt tagatataca cgtaaacttt
42301 taatggacca cacggaagat atatttcaag gcctggggta tgttaaattg ttattagatg
42361 gaacatatat ataaagtagc gcctattaaa gaaaaaaaaa aaacaacgat tattttctgt
42421 gtatttttat ttacacccta cgacttcttg aagcgtttcc agattgtccc gtgtgtgaca
42481 aggtctgtcc cttacccccc tgggggggtat tttgggttgg gggcggggta gactgtggca
42541 cgccttgggc cgcgggcggt gatccggttg ttggctggac agtgcttgac tgtgctccct
42601 gttgcggttg ttgtccagaa gaccccgaca ccacgtgttg ctgttgtcca acggatgccg
42661 acgtcgtttg aggtgggggg tgttgcgggg atgatcccga aaacgccaac gcggcgggct
42721 gttgtaaagc agactgatcg gcgctctgtg ttttttgcgg caatatagta ggccccgaga
42781 ttcccaaact catggatgga tttgggggtt gtggtcgtat aatacgcggg ttaaacgtac
42841 gttttaagcc aaccgttggt cttaaccatg tcatagggtc agtctcggca aacatggccg
42901 ttcggcgtat cgtatttgca ttatggttag cgcgtgcacg cgcggcactg gccgcggctc
42961 ccacggtgta aatgcttctg gcatcagcga tgtccacacg gtgaccaggt tgcaaaggtc
43021 cactggcgtt taaaagtcgt attaaagcaa cgggggtgta agccgcaatt gcttccaccg
43081 aaaatgtggt ggggttgctg ggatcaaaga ctacacgaga cgatgcgggt tgtgtcatcg
43141 tttattagtt tacgggacaa tcgataacag catacacgta catctgcgca ggatatgtac
43201 ggaaaggcaa tttatttcca gaaaagcacc gcccctaata caactaccag tacaattaca
43261 atgaacaggg catatgtcac gttagctacg ggtagagcaa gtttccagac acgcgtagtt
43321 tgggtatcgg gtaacgcagg tttaatgtca ctttgcattt gaacagacgt gtttggactt
43381 ccgttctcgg gtggggatct gaatgaaggc cgccagcgta tatattcatc caaattattg
43441 ccagtttcct tatacatgta tgcatccgtg gcgcgggcca taagtttaat ggtgcgagat
43501 ggatcttccg gtcccataaa acgaaaggat aactgaacat atggcattcg cacaaagcag
43561 ttcacccaca ttaaagcctg gagaggtcgg cggtcaatac ccccacctcg tttaattgat
43621 tccaaagcag ataggttgat accggtactt aacgttgaac taagaatcac gttattactg
43681 tcaatggaca cttcagccac tggtgcgtta gtcggacgaa aaaaaaaacc ttgaaatagc
43741 acagacaccc ccgtattttg aatttttatg taagggtcac aatctacttg cgcccaattc
43801 gccattaaac gcataatata ctctaccgga aaggcttcgg atacgttgtc ttcgccgtta
43861 aactgaaaaa cacaacgggc gggggggcgt tgtggatcaa atattggaag atccccatcg
43921 caacattgaa gagcgcttgg taccaccaac cgaatacgtt gtaaaagatt atctccgcaa
43981 cccctcctgc gttcactccg tacatacgtt ctccgtgaca tattgatcta aggttgcaaa
44041 ccaaggcaca cgcgtgaagt atttagacca tttatcgtgg gatataggag gagtttggag
44101 tgatccaccc cctgacgact tattaatgcg tttatttttcc ccatgtatta agcatccttc
44161 aatatttcat gcaaatctag aaatttggcc atgactcccg caaagcgttc acggcgacgg
44221 gtcacgctgg cactatgttc acatggaaca acataagcag atttttctga atcgttactt
44281 tctttatgtt ttaaaacgga cgccaggcga ctggtaaatg atatataatt taattgagcg
44341 tcagttgtag gtagaattgc ttctatttcc gggggaatta aattttcaaa ccaaacggaa
44401 agagtaaagg tgctatcagc aggaaaatac tttgactcca gtgcatcgat atttaataga
44461 ttaacatcgg tgtctgtaat taaatcgcgg gccctcatcc cagagatgga tcgggtagaa

44521 tcagaagaac ccatggatgg attcgaatcg cccgtattct ccgaaaatac atcttctaat
44581 tccggatggt gttccgacgc attttccgat tcgtacatcg cttataatcc agcccttctg
44641 ctaaaaaacg atttgttatt ttcagaattg ttatttgcct cccacttaat aaatgttccc
44701 cgtgcaatag aaaacaacgt cacttatgag gcctcttcgg cggtaggtgt ggataatgaa
44761 atgacctcaa gtaccactga atttatagaa gaaattggag acgttttggc gttagacaga
44821 gcctgtttgg tctgcagaac gcttgatttg tataaacgta aatttggact gacaccggaa
44881 tgggttgcgg actacgccat gttatgtatg aaaagtctgg catccccgcc ctgtgcagtt
44941 gtcactttta gcgctgcctt tgaatttgtg tatcttatgg atcgttacta cctgtgccgt
45001 tataacgtta ctttggttgg gtcctttgcc aggcgcacgc tttccctgtt agatatacaa
45061 agacattttt ttttgcatgt atgttttcgt accgatggag ggttaccagg tatacgaccg
45121 ccccccggta aggaaatggc caacaaagta agatattcca attactcctt ttttgtacag
45181 gcggtagtta gggctgcatt actatcgatc agcacgtctc gtttagacga aaccgaaacg
45241 cgtaagtcat tttactttaa tcaggacgga ctgactggag gccctcaacc tttagcggcc
45301 gccttggcta attggaaaga ttgcgcgcgg atggttgact gttcatcatc ggaacatcgc
45361 acaagtggga tgattacctg cgcggaacgt gcattaaaag aggatataga gtttgaagat
45421 atattaatag acaaacttaa aaaatcgtct tacgtagaag cagcttgggg ttacgcagac
45481 ttggctttat tattactgag tggggttgct acttggaatg tagacgagcg tacaaattgt
45541 gctatagaaa ctcgcgttgg atgtgttaaa tcatactggc aggcgaaccg gattgaaaac
45601 tccagggacg ttccaaaaca attttccaaa tttacgagcg aggatgcctg tcccgaagta
45661 gcatttgggc ctattttgtt aactacctta aaaaacgcaa agtgccgtgg tcgcacgaat
45721 accgaatgca tgttatgttg tttattaacc atagggcact attggatcgc tttgcggcag
45781 tttaaaaggg atatattagc atactcagca aataacacaa gtttatttga ctgtatcgaa
45841 cctgtaatca atgcatggag cctagataac cccattaaac ttaaatttcc atttaatgat
45901 gagggtcgat tcataaccat tgtaaaagca gcaggttccg aggccgtata taaacattta
45961 ttttgcgatc tcctatgcgc tctctcggaa ttacagacaa accctaaaat tttatttgcc
46021 catcctacaa ccgcggataa ggaagtgttg gagttatata aagcccaact ggctgcacaa
46081 aacagatttg aaggtcgtgt atgtgctggc ctgtggacat tggcgtatgc atttaaagcc
46141 taccagattt ttccacgcaa accaaccgcc aatgccgcat tcatacgaga tggaggactt
46201 atgcttcgac gacatgcaat atcgctggtc tccctcgaac acaccctatc gaagtatgtc
46261 taggcgatat aaatccgtat ctcggagcgg gccttcgatg cgtgtacgct ccagaacgcc
46321 atgccgccgt caaaccattc gaggaaaact tatgtcaaag gagcggtctg tgtaccgcca
46381 ttattttaat tacatcgcaa ggtccccccc agaagaacta gctaccgtta gaggcttaat
46441 cgtgccaatt attaagacga cccctgtcac ccttccgttt aacttgggtc agacagtggc
46501 ggataactgc ctgtcgttat ccggaatggg ttatcattta ggtctcggag gttattgtcc
46561 gacatgcact gcatctggag aaccgcgtct atgtcgaacc gatcgggcgg ctctgatact
46621 agcatatgtt cagcagctta acaacatata cgaatatcgt gtgtttcttg catccatttt
46681 ggcgctatca gaccgagcca acatgcaagc agcgtccgct gaacccctat tgtcgagcgt
46741 attggcacaa ccggaattat tttttatgta tcatattatg agggaggggg gcatgcgaga
46801 tatacgcgta ctttttttatc gtgatggaga tgccggaggg tttatgatgt atgttatatt
46861 tccggggaaa tctgttcacc tccattacag actaatcgat catatacagg ccgcgtgtcg
46921 ggggtataaa atagtcgcac acgtttggca gacaacattt ttactgtcgg tatgtcgcaa
46981 cccagaacaa caaacagaga ctgtggtgcc atccattgga acatcggacg tttactgtaa
47041 aatgtgtgac cttaactttg atggagaatt gcttttggaa tacaaaagac tctacgcatt
47101 atttgatgac tttgttcctc ctcggtgatt tcagcttcag tgttcatttt attatcccag

47161 cacggggcgt gtatacaaac aaagcctgcc gcctgcaagc ggtttagcat tttaacgtta
47221 acaactcgtg tctctggaat aaaacgtttt aaaagccgtt ctgtgagttt agtgtcgttt
47281 ccaaataacg ccttaaaagt tacactcgcc gtcccaatga gatgagaaaa ataatagtca
47341 atgtttaaag acagcccgtg tgatgttacg tgaatgggat cttccgctaa gtcagatatt
47401 attaacttac gctttgcttc cccacaccgt ttacctgcgg tattctgtaa aggatctcca
47461 cgtagcaaag ctacactttt tgcatcagcc tccacttcgt ctgtgggggc cacaataaca
47521 taagggatgc gttctcgaac gtttgggatt tgaccctgtc tcattactaa tttataatat
47581 actgttaagt gagccaagcg acggtttatg taggcggatg gtggacgact aagctcggcc
47641 gtcataacaa acttattaat atccaatttg ggtgatgtaa tctggcgatg tgcatctgca
47701 attatgcgtc caaacccggc catcccagac ggcatggccc gtctattcca ttcagcaatg
47761 gaaacacacg acgcctccgc cgcagcacgc gagacggtgt cgtcatataa caacagttct
47821 acaagtttgc gggcataatc gttaataaat tgacagttgt tttttctaac caagtcgact
47881 cccttcatta aaacctttcc gccgtaaatt accccaatgt acttttttctt tgttataagc
47941 aaaagtttta taaaagtttt ttcacactcc aactttatag gaggacaaaa cagagccgtt
48001 gaaattatat gtgccatttt ctcgccgatt ttagctatcc cctcaacact aacacccttg
48061 aatcggataa acacagaatc cgtatctcca tatataacct ttacctcgta cgctttttgg
48121 gagagaacgc tactttcaat gtctggaaac gctgtaataa aacgttcaaa tgcggcccag
48181 ttattatgaa tataatctct ggtacttaat aacatttgac ggccaattgt agtgacagtg
48241 gccgctacgt ataaacatgg cagaaatccc tgcgcaactc cagtaaaacc gtacacggaa
48301 ttacaaacta cttttatcgc ggcttgttgt ttgtctaata acactgcttc atctgaagaa
48361 cttccgggta tgcgcgctct aatagccttg cgcatagcca accagtcttt taaaagaaca
48421 cccagcagac tttctcgaac gttagagcgc acaaaaaaaa gacgttttcc tccaactgta
48481 aaggtggcat aatcggatgg attcaaacgt ttaaccgtct caaaatttaa cgttagcgtg
48541 gtaaaacata agttatgggc ctgaattata cttggatata aacttgcaaa atccaatacg
48601 accaccggat cgatataaaa tcccgtatca gggtcaaaaa ccctggctcc tttatatcct
48661 acatttcgcc cacttgacgt accagtggga gaaacgctct cgtcttcatc catctcttcc
48721 tcaacatccc cgacatcggg aataacatcc ttatattcaa aagtagctgg gtatccccca
48781 tcgggtaaaa taaatcctcg agacgaagcc agtcctaata aacaggtgta aatcctaacc
48841 tgctgtccgt cgtaaatagc cttggttaaa gtaattctag ctagccttgc aaccgcggat
48901 aactcaaggt gtggtaaata tttaaaaaac agtttcccca caagagccga gtcttgtata
48961 caatattcac caataattcc tcgtgtattc ggtccactag cgtaatatcc cggaatgtct
49021 ttgtagggca aatctctctt ggactcattt agagcttcac gtgcaaccga atctaattta
49081 taactcgaga gttttaattt ttcagttgca attgcataca tatccagaga tatgagaccg
49141 ttgatcttta ccttgcttcg tcgctgaaat ccggatttgc caacatccca tatcttaaac
49201 agacccccac ggtttatact gccataacca tcaagcttga gactgtatat agaattaagt
49261 ttctccataa taaacgccca atcaaaatta acaatgttat aacctgtggc aaactcggga
49321 gcgtactgtt ttacgagggt cataaatgca attaatagct cgaattcact atcaaactcc
49381 agcacagtcg gctccggtaa ccccgcgtcc ttcatttctt gtacatacct ttgtggtaag
49441 tcacaagagc caagggaaaa cagtaaaatg tgttctaaag actgtcgagg gattgaatat
49501 aatagacaag aaatttggat tacaagatcc tccagatgtg ttgcatcggg aaacgccagc
49561 tcattagatc ctcctgattt acattcaata tcgaaacata acaacttgta gtcaggccat
49621 gagtcatcgt ttggtatagc ctgcagatta tccgacatgc agtcaatttc aacgtcgctt
49681 aacgttaatt ggcgacttgc cggtcgaact cgaacacgtt ccccatcaac tccaggtttt
49741 agttgatacc aaccaaaact aacaaagccg ggattatcca ttagaaaacg agtggtagcg

49801 tctacccgac cttcatactt tttcaactcc gggtgaaagt tatcacaaag ataatttgta
49861 aatttagatg agggagaata caccctgtaa aacgcacatg gctgtgtatc gtagtaataa
49921 acatctgtgc gctcaataac ctcaacgcga aagctttctg gagatgcgct tttaaacgag
49981 gtaccatgaa aagcgttctt gtctccattt aacgttgcat cattttgtgt tatcatagaa
50041 ctgcgtaaac actcggcaag taatacagat aactcgctac cggaacgtat gccacaagcg
50101 gtatccacct cggctttgtt tatataaaaa tattgacaga tgccgtatac atgaactgcc
50161 acccttttc cacatcggga catgccaagt aaagtaataa cggtaccaag cggtcgtgtt
50221 gcagttgcaa accgggatac atctccatta gacgcggctt ctgttgtttc gacaatatca
50281 tatacatgga atgtgttaaa gcgggggtca aacttatccc cacgaaagtc gatttccccc
50341 caaatattca cgcgtctagg ccaggggctg gaacaacgaa aatccagaat cggaacttct
50401 tttccattac agtaaacttt aggcggtcga ctaagtgtac cgacgtgaac ccccttttcgt
50461 tcttccatgg gcacatcttc atctaaacat ttaggggcca aaaattgaaa cgatgacatg
50521 gtagttttgt aactatgaag aaattctctg ttactaccgc gcccggttct tgggttatat
50581 ttaatccctg atgcttgggt taaaaaggga ttacaaaacc ccgttctgat cgccatttta
50641 tgttaacgat tgataatctt gtaaaaagcc agtgttactg agtaacacaa ccccacgccc
50701 ttctaataca taaagtgtaa tcacgtgatt tgttgtggtt tccgcatatg taatacccgt
50761 ttaaaagcct ctcttcttaa tgtatcgaca gactgggttt tgggtggtca tttgaccctg
50821 ccaacaaccc cccattatta cgagtacttc accaaaatgg aaaatactca gaagactgtg
50881 acagtgccca cggggcccct gggttacgtt tatgcgtgcc gggttgaaga tttggatctg
50941 gaggaaattt catttttggc cgctcgtagc acggactctg atttggcttt attacctttg
51001 atgcgtaatt tgaccgtgga aaaaactttt acatccagcc tggcggtggt ttctggagca
51061 cgcactacgg gtcttgccgg agctggtatt accttaaaac tcactaccag tcatttctat
51121 ccatctgtct ttgtctttca cggaggcaaa cacgttttac ccagctccgc ggccccaaat
51181 ctcacacgcg cgtgtaacgc ggctcgagaa cggtttgggt tttcacgctg ccaagggcct
51241 cctgttgacg gtgctgttga gacgaccggc gctgagatat gcacccgcct tggattagag
51301 ccagaaaata caatattata cttggtggtc acggcattgt ttaaggaagc cgtatttatg
51361 tgcaacgtgt ttctgcatta tggaggactc gatattgttc atattaacca tggggatgtt
51421 atacgtatac cgttatttcc ggtacaactt ttcatgcccg atgttaaccg tctggtaccc
51481 gacccattca acactcatca caggtctatc ggagagggtt ttgtataccc aacacccttt
51541 tataacaccg ggttgtgcca tttaatacat gactgtgtta ttgctcccat ggccgttgcc
51601 ttgcgcgtca gaaatgtaac tgccgtcgcc cgaggagcgg cccaccttgc ttttgatgaa
51661 aatcacgagg gggcagtact ccccccctgac attacgtaca cgtattttca gtcctcttca
51721 agtggaacca ctaccgcccg tggagcgcgt cgaaacgatg tcaactccac gtctaagcct
51781 agcccatcgg gggggtttga aagacggttg gcgtctatta tggccgctga cacagccttg
51841 cacgcagaag ttatattcaa cactggaatt tacgaagaaa ctccaacaga tatcaaagaa
51901 tggccaatgt ttataggcat ggagggcact ttgccaaggc taaacgctct ggggtcatat
51961 accgctcgtg tggccggggt cattggtgcg atggttttca gcccaaattc tgcgttgtat
52021 ctaactgagg tggaggatag cgggatgacc gaagccaagg atgggggacc gggtccatca
52081 tttaatcgat tttaccagtt tgccggacct catttagctg cgaatcccca aacagatcga
52141 gatggccacg ttctatccag tcagtctacg ggttcatcaa acacagagtt tagcgtggat
52201 tatttggcac tcatttgtgg atttggagca cccctgttgg cgcgactgct tttttatcta
52261 gaacgctgtg acgctggtgc gtttacaggg ggtcacgggg atgcgttaaa atatgttacg
52321 gggacctttg actctgaaat tccatgtagt ttatgtgaaa aacacacgcg gccggtatgc
52381 gctcacacaa cagtacaccg acttagacaa cgcatgccgc gatttggaca agccacccgt

52441 caacctattg gggtgtttgg aacaatgaac agccaatata gcgactgcga tcctctagga
52501 aactatgctc catatttaat ccttcgaaaa cccggggatc aaacggaagc agcaaaggca
52561 accatgcagg acacttatag ggctacacta gaacgcttgt ttatcgatct agaacaagag
52621 cgactactgg atcgcggtgc cccatgttct tccgagggac tatcgtctgt cattgtggat
52681 catccaacgt ttcgtcgcat attagacaca ctgcgtgcgc gtatagaaca gacaacaaca
52741 caatttatga aagtgttggt tgagacccgc gattataaga tccgtgaagg attatccgaa
52801 gccacccatt caatggcgtt aacgtttgat ccatactcag gagcattttg tcccattacc
52861 aatttttttag ttaaacgaac acacctagcc gtggtacaag acttagcatt aagccaatgt
52921 cattgtgtat tttacggaca gcaagttgag gggcggaact ttcgtaacca attccaacct
52981 gttttgcggc ggcgttttgt tgacctgttt aatgggggggt ttatatcaac acgctctata
53041 accgtaacat tatctgaagg tcctgtatcc gccccaaatc cgacattggg acaagacgcg
53101 cccgcggggc gtacctttga tggggattta gcgcgcgtaa gcgtggaagt tattcgggat
53161 atacgagtta aaaatagggt cgtttttttca ggtaactgta caaatctctc tgaggcagcc
53221 cgggcaaggc ttgtaggcct tgcaagtgcg taccaacgcc aagaaaaaag agtggatatg
53281 ttacacgggg ccctagggtt tttgcttaaa cagtttcacg gcctgttatt tcctcggggt
53341 atgccaccaa acagtaaatc ccccaacccg cagtggtttt ggaccctgtt acaacgcaac
53401 cagatgccgg cagataaact tacacacgaa gagattacca ctattgcagc tgttaaacgg
53461 tttaccgagg aatatgcagc aataaacttt attaatctac ccccaacctg cataggagaa
53521 ttagcccagt tttatatggc aaatcttatt cttaaatact gcgatcattc acagtacctt
53581 ataaatacct taacttctat aattacgggt gccaggcgcc cgcgtgaccc atcatccgtt
53641 ttgcattgga ttcgtaaaga tgtcacgtcc gccgcggaca tagaaaccca agcaaaggcg
53701 cttcttgaaa aaacggaaaa cttaccggaa ttatggacta cggcttttac ttcaactcat
53761 ttagtccgcg cggccatgaa tcaacgtccc atggtcgttt taggaataag cattagtaaa
53821 tatcacggag cggcaggaaa caaccgcgtc tttcaggcag ggaattggag cggtttaaac
53881 gggggtaaaa atgtatgccc gctatttaca tttgatcgca ctcgccgttt tataatagca
53941 tgtcctagag gaggttttat ctgccccgta acaggtccct cgtcgggaaa tcgagaaacc
54001 accctatccg accaagttcg cggtataatt gtcagtggcg gggccatggt tcaattagcc
54061 atatacgcca cggttgtgcg tgcagtgggc gctcgagcac aacatatggc atttgacgac
54121 tggttaagtc ttacagacga tgagttttta gccagagact tggaggagtt acacgaccag
54181 attatccaaa ccctggaaac gccctggacc gtagaaggcg ctctagaagc agtaaagatt
54241 ctagatgaaa aaacgacagc gggagatggg gaaaccccca caaacctagc atttaatttt
54301 gattcttgtg aaccaagcca tgacaccaca tctaacgtat taaacatttc agggtcaaac
54361 atttcagggt caactgtccc tggtcttaaa cgacccccg aagatgacga actctttgat
54421 cttagtggta ttcccataaa acatgggaac attacaatgg aaatgattta acctccctct
54481 ttatccaatt aaagcccaca cgcgggtgag tgtacgtaat aaacaagtca atattacata
54541 ttctgttgtg ttttcttttt ttgtgtgtag tccttaccca tatgacctgt aatatagtgt
54601 gtctccaacc attcagctta cagtccagtg gacagtaaca gcccgataac atggaattgg
54661 atattaatcg aacattgttg gttctactgg gtcaagttta tacgtacatc tttcaggttg
54721 aactgctacg tcgatgtgat ccaagggtgg cgtgtcgctt tttatatcgg ttagcggcta
54781 actgtttgac agttcgttat ttattaaagc tgtttctccg gggatttaat acccagctaa
54841 aatttggaaa cactcccacg gtttgtgcac tgcattgggc attatgttat gtaaagggag
54901 aaggtgagcg tttgtttgag ttgctacaac attttaaaac gcgttttgtt tatggtgaga
54961 ctaaagactc aaactgtatc aaagattact ttgtctcagc gtttaactta aaaacctgcc
55021 aatatcacca tgagctgtcg ttaacaacat acggaggtta cgtatcgagt gaaattcagt

55081 ttttacacga cattgagaat tttttaaaac agcttaatta ctgctatatt atcacgtctt
55141 ctcgtgaggc gctaaacaca ttggaaaccg tgacgcggtt tatgacagat actataggaa
55201 gcggtctaat accacccgtg gagttgtttg atccggcgca tccatgtgct atatgttttg
55261 aagaattatg tataacagct aaccaaggtg agaccttaca tcgtagatta ttaggatgta
55321 tctgcgatca cgttactaag caagttcggg ttaacgtgga tgttgacgat attattcggt
55381 gtttaccata tatccctgat gtaccggata tcaaacgtca atccgccgtt gaagcgttac
55441 gaacacttca aaccaagacg gtagtcaatc ccatgggagc aaagaacgat acgtttgacc
55501 aaacatacga aattgcgagc accatgcttg attcttataa tgtttttaaa cctgcccctc
55561 ggtgtatgta cgccatcagc gagcttaaat tctggttaac gtctaattcc actgaaggac
55621 cccaacgtac tttagacgtg tttgttgata atttggatgt attaaacgaa catgaaaaac
55681 acgcagaact tacagccgta acggttgagt tggcgttatt tggaaaaact cccatacact
55741 ttgatagggc gttttctgaa gaactcggat ctctggatgc aattgatagt attttggttg
55801 gcaatcgctc atcctcacca gacagtcaga tagaagcatt aattaaagcc tgttatgccc
55861 atcatctatc gtcgcctctc atgcgtcaca tttctaaccc gagtcatgat aacgaagccg
55921 ccttacgcca acttttagaa agagttgggt gtgaggatga tttaaccaaa gaggcgagtg
55981 acagcgctac agcatccgaa tgtgatctga acgatgatag tagcataact tttgctgttc
56041 atggatggga aaacctgtta tccaaagcaa aaattgacgc tgcggaaaga aaacgagtat
56101 atcttgaaca tctgtctaag cgctctctaa ccagcctcgg tagatgtatc cgcgaacagc
56161 gccaagagct agaaaaaaca ctcagggtaa acgtttatgg agaggcctta ttgcagacat
56221 ttgtttcgat gcaaaatggg tttggggcac gaaacgtgtt tttagctaag gtttcccagg
56281 cagggtgtat tatcgacaat cgcattcagg aagcggcctt tgatgcacat agatttataa
56341 ggaatacctt agttcgacat acagtagatg cggctatgtt acctgcactt acacataaat
56401 tttttgagtt ggtcaacggc ccattgttta atcacgatga acaccgtttt gcacaacccc
56461 ctaacaccgc cttatttttt accgtggaaa acgttggcct atttccgcac ttaaaagagg
56521 aattggcaaa gtttatgggc ggtgtcgttg gttccaactg gcttctcagt ccatttaggg
56581 gcttttattg cttttctggg gtagaaggcg ttacttttgc acagagactt gcctggaaat
56641 atattaggga gcttgtgttt gcaaccacac tattcacctc tgttttccat tgtggggagg
56701 tgcggttatg tcgcgttgac cgtctaggta aggatccacg cgggtgcacg tctcaaccta
56761 aaggtatagg cagttcccac ggacccttag acggcattta tttaacgtac gaagaaacat
56821 gtccccttgt ggctattatt caaagtggag aaacagggat cgaccagaat accgtcgtaa
56881 tctacgattc agacgttttt tctcttctat acaccctaat gcagcggctg gctccggatt
56941 caacggaccc ggcgttttca taacctccgt tacgggggtg tggttatgct ttttatgcat
57001 attttctatg tttgttacgg cggttgtgtc ggtctctcca agctcgtttt atgagagttt
57061 acaagtagag cccacacaat cagaagatat aacccggtct gctcatctgg gcgatggtga
57121 tgaaatcaga gaagctatac acaagtccca ggacgccgaa acaaaaccca cgttttacgt
57181 ctgcccaccg ccaacaggct ccacaatcgt acgattagaa ccaactcgga catgtccgga
57241 ttatcacctt ggtaaaaact ttacagaggg tattgctgtt gtttataaag aaaacattgc
57301 agcgtacaag tttaaggcga cggtatatta caaagatgtt atcgttagca cggcgtgggc
57361 cggaagttct tatacgcaaa ttactaatag atatgcggat agggtaccaa ttcccgtttc
57421 agagatcacg gacaccattg ataagtttgg caagtgttct tctaaagcaa cgtacgtacg
57481 aaataaccac aaagttgaag cctttaatga ggataaaaat ccacaggata tgcctctaat
57541 cgcatcaaaa tataattctg tgggatccaa agcatggcat actaccaatg acacgtacat
57601 ggttgccgga acccccggaa catataggac gggcacgtcg gtgaattgca tcattgagga
57661 agttgaagcc agatcaatat tcccttatga tagttttgga ctttccacgg gagatataat

57721 atacatgtcc ccgtttttg gcctacggga tggtgcatac agagaacatt ccaattatgc
57781 aatggatcgt tttcaccagt ttgagggtta tagacaaagg gatcttgaca ctagagcatt
57841 actggaacct gcagcgcgga acttttagt cacgcctcat ttaacggttg gttggaactg
57901 gaagccaaaa cgaacggaag tttgttcgct tgtcaagtgg cgtgaggttg aagacgtagt
57961 tcgcgatgag tatgcacaca attttcgctt tacaatgaaa acactttcta ccacgtttat
58021 aagtgaaaca aacgagttta atcttaacca aatccatctc agtcaatgtg taaaggagga
58081 agcccgggct attattaacc ggatctatac aaccagatac aactcatctc atgttagaac
58141 cggggatatc cagacctacc ttgccagagg ggggtttgtt gtggtgtttc aacccctgct
58201 gagcaattcc ctcgcccgtc tctatctcca agaattggtc cgtgaaaaca ctaatcattc
58261 accacaaaaa cacccgactc gaaataccag atcccgacga agcgtgccag ttgagttgcg
58321 tgccaataga acaataacaa ccacctcatc ggtggaattt gctatgctcc agtttacata
58381 tgaccacatt caagagcatg ttaatgaaat gttggcacgt atctcctcgt cgtggtgcca
58441 gctacaaaat cgcgaacgcg ccctttggag cggactattt ccaattaacc caagtgcttt
58501 agcgagcacc attttggatc aacgtgttaa agctcgtatt ctcggcgacg ttatctccgt
58561 ttctaattgt ccagaactgg gatcagatac acgcattata cttcaaaact ctatgagggt
58621 atctggtagt actacgcgtt gttatagccg tcctttaatt tcaatagtta gtttaaatgg
58681 gtccgggacg gtggagggcc agcttggaac agataacgag ttaattatgt ccagagatct
58741 gttagaacca tgcgtggcta atcacaagcg atattttcta tttgggcatc actacgtata
58801 ttatgaggat tatcgttacg tccgtgaaat cgcagtccat gatgtgggaa tgattagcac
58861 ttacgtagat ttaaacttaa cacttcttaa agatagagag tttatgccgc tgcaagtata
58921 tacaagagac gagctgcggg atacaggatt actagactac agtgaaattc aacgccgaaa
58981 tcaaatgcat tcgctgcgtt tttatgacat agacaaggtt gtgcaatatg atagcggaac
59041 ggccattatg cagggcatgg ctcagttttt ccagggactt gggaccgcgg gccaggccgt
59101 tggacatgtg gttcttgggg ccacgggagc gctgctttcc accgtacacg gatttaccac
59161 gtttttatct aacccatttg gggcattggc cgtgggatta ttggttttgg cgggactggt
59221 agcggccttt tttgcgtacc ggtacgtgct taaacttaaa acaagcccga tgaaggcatt
59281 atatccactc acaaccaagg ggttaaaaca gttaccggaa ggaatggatc cctttgccga
59341 gaaacccaac gctactgata ccccaataga agaaattggc gactcacaaa acactgaacc
59401 gtcggtaaat agcgggtttg atcccgataa atttcgagaa gcccaggaaa tgattaaata
59461 tatgacgtta gtatctgcgg ctgagcgcca agaatctaaa gcccgcaaaa aaaataagac
59521 tagcgccctt ttaacttcac gtcttaccgg ccttgcttta cgaaatcgcc gaggatactc
59581 ccgtgttcgc accgagaatg taacgggggt gtaaatagcc agggggtttg ttttaattta
59641 ttaataaaaa tgtgtattac gttactcatg tgtctccatt acgcatcaca gggggtattt
59701 atacccgata atatacaaaa cgcgttttgt acctctaccg cacccgatat cttaacgggg
59761 ttattatgga atcgtctaac attaacgcgc tacaacaacc gtcgtctatc gcacatcatc
59821 cgtccaaaca gtgcgcttca agtctcaatg aaacagtaaa agattctccc cccgcgattt
59881 atgaagatag gttagaacac acgccggtac aattaccccg cgacggtaca ccccgagacg
59941 tatgttctgt gggacagcta acctgtcgag catgtgcaac gaaacctttt cgccttaacc
60001 gcgacagcca atacgactac ttaaacacat gtccaggggg ccgtcatatt tcactggcac
60061 tggagattat aacgggtcga tgggtttgca tcccgcgtgt gtttccggat accccagagg
60121 aaaaatggat ggcgccatat attattccag accgagaaca accatcatca ggggatgaag
60181 attctgacac cgattaaatt taacttaaat aaaaccttac cacccataaa aacgccttct
60241 gtttgtttaa cacgacaccg cttaacaaaa aaaaaaaaac caaacacgcc ttttatgaat
60301 gtaatacttt tatttgttgg ttaacaccgc cccaccatca tctgatttgc aaacatatcg

60361 gcgtcgtctg ccgtggaccc ctgtattaaa ggggccttgg aactcgcctc cactgcattt
60421 acatcttgtc caactgtatc tgtatgtggg gtgcttgttg tattttggga tgagcataga
60481 cccgaaacgc tttgaagctg ttttaataaa atcgatattc gaggatcccg tgtcccctct
60541 ggtatatttg tatggtgcga caaaggcatt tgtgtcccat tttgtgattt tagctctgta
60601 acctcctgtt gcagttttgc cacaacccca gcaagctctt cgtgctgacc attagaaact
60661 ctgtgtctcc tctgccaata tgatggagaa actcgacgtc tccgatgcgt tatatacgtt
60721 ggttcaccgg gaaaatatat atttgaggga aactctccgt ccatttgaga ctccccacta
60781 taaaaagaat ccaattccct ttgatccatg ctcttgaaat cccgttttcc tggacgacgg
60841 acatcggttt tgtctggaaa atttacacac ggggtctgca agtcaatacc ccgttcggcg
60901 gccaatgcgt tcataaatgc ggacatttgc atttccaaac gattgggtgg tggatatccc
60961 ggaaacccgt acggtccccc gaagtgtccc ggagggcaac cataaccccc tgtattaggt
61021 gggaaggcag gcgggtgtgg agatccatat ggcccgacga tatactgtcc gttatttgga
61081 gctccaattg atacctgcgg atttttagtc tgcccggtta acagctgtga ataatacgcg
61141 gtaggtatca gtacaaattc ccctccggtt ggaacgcccg acgggggctg tggtgagata
61201 ttactagcgt tacctgctac agaagccata tcgctgtcgt tcctacacaa ctgcgtaacc
61261 tttaaatgcg gaacagtctt ttcacaatct tcatttgatt ccccaacacc caacgcgaga
61321 tcgtatatgg gcccgccggg gtggaatgtg gcgtttataa cacccgcgtt gggtaattta
61381 gactccaccc cattaacgtt ggttatccga gcaagtccat atccggtgct agcctgaaga
61441 taaacgtgac ccataattcc ggcttcgcgt ctacgttttg caaccacgtc ccatctatct
61501 cttaaaagca tattgttcac ggctgtggat aataacacct tggcgagttt atcttcgcta
61561 accttccata ctttatttaa acccgcgtag tctttaacca gcgacaataa ccgcgcttta
61621 ctttccatcg ataaaacccg gaatggttca attgaagatt ccggggtaca gtcataattg
61681 accactgttc caacgcgtct tccaacaaca cataacgcaa catgggtaaa aaaattaccg
61741 tctggtatct cattcgggga caatcgtttt gaagacaggg atacggaggg taagtaattt
61801 gtgaccaagt ataacgcacg ttctagcgga gataatacag aatctctatt tccaaaaaaa
61861 ttcgaatggg ccgcttcaaa cagcaccgca tgtagttgag ggcatctaac gatacccaaa
61921 aaaaaaggtc cgcgtatgtc ctcaatgatt gcgattactt cacccacgac acagtctttt
61981 cgatgatcga tgtttattgg tattttacta gtaggcggca aagcggaccg cacaatctct
62041 ggggtaatat ttaattcccc ttcgtccttt gaatataagg ctaaataccc agccacgtat
62101 aacgcttcac agttctcttc gtcagcttca gcagccatta taaacacccc acggaccgga
62161 tagtgaatac tcacggtgtg gaggcaaact gaggaatgac acccaaacag acaaaatata
62221 gaagatcata gtcactgtta acgttgaact gcgcaaggcg gcgactttct tccaatgccg
62281 cccttacacg cggttggtgc attaacattc caagtccccg ttcatattgc aacataacac
62341 tgtcatgtat tgataccacg gcggctatgg gtagggatgt aacattttgt cggcggtgtt
62401 ctaattccaa tgcaattaag cttatgagcc gatcttggta ctgtccagaa gaaatatcta
62461 ttacggttct tcctaaactt ccacgactaa gctgggtatg cgcgtctaaa caaagagcaa
62521 ctaatccagg aaacatttca gtcagctctg tggtccgatt taacgtatac agtggtgcta
62581 tatatcgttc acataaaaat tgaaagttat tattaccgct tttaaacttc ccatcaaacc
62641 ccgtcgctcc gcgcaagatt acattgttgg taggggttcc tgttgcttct gacacaatca
62701 aacccagttg aaaattattt tttagtttat ctccgtatac gttcccgttc cataataagc
62761 gccttaataa taataacgcc gtaatcgtgt caattgttaa ccttaataga gtttggtctt
62821 ccataagaaa cacgttttgg gcccgttcta aatacgccgc ggccgcctgt tgaatcttgt
62881 ccacatatgc ggtatgattg cgatcaataa tgtcattaac cccaggatta aactgtccag
62941 gtgcaggcgg taggacctgc aaccgtataa gcgcatccat aacagaatgt gacgttaagg

63001 cgccttgatc ataccgcccc ccacgagcat gaaactggtc gcgtggtaga cgatcatagc
63061 aaaattgata actgttttta ttttcgtgtg ttgtcatata attcacaaat gtctcagtat
63121 attccggtag gtgctctata aggttcccga aggacgaaac ttgaggttcg tggacactat
63181 tagatgtcct atacattaaa tataaacata ataccgcaca ctcgaacgcg gagtacgctc
63241 tatctccaac atacattctc ccggcggact gtagacatgt taccgttgtg ttcataaacg
63301 tacgggaaat gcgcccgtct ttacaatcaa ctccgcgtgc agctacgggc ctatctaaca
63361 caagccgttc ctgcagagta cgataccatg gcccgaaaac aatccctgga gagttattgc
63421 cccttgccct tcccaagtac accagggtga taaaatccac ttgaaagttt gtatcgtact
63481 gcaacggtgc atcatttttg gcaatctgta cctcggggtg tatagactca ttgcgtatta
63541 tttctgtacg tgtacattcc tcagattgtg catctgcttc ttccgcctcg gcagcagccg
63601 tctccaggga atccaaaacc ttggccatgc gcgttagttg ttcttcgagg ggctttaaac
63661 gacgatctat ttccgttggt aacgtaatcg tttccccgcg aaggttgtct aatgcggcaa
63721 cggccgccgc atttttaac gttaacgtat ttttttccaa atcgggattc atacgccctc
63781 ttaactcaaa cgcgggagcc gtccagtagt gtatggggaa gttgggggct ataaagttct
63841 tagtggtaga caaaaatatc ccacatttat tcggaaacga gatagatccg aacccatatc
63901 tcgccgtcat ggtgtctgca gcaaacaaag tcaactggcg tgaatataaa ccggtactgc
63961 tttaaaagct gttttcttac ccatgggaaa acatcccggt tatactttgt aaaattccac
64021 cacaagcacc taaagaaggc cttctaaggg gtaaatccac cccacaagct gcattttctt
64081 caaactttgt taaagcggaa cgatggcatg atttcgcacg ctttttcgca agagaacata
64141 cgtgaatttt ctttttgcat agacgtcttc gctctctaac ggaccttatc ggggggtat
64201 attccgctac attctccaaa tgcgacgcta gcataacaag gtttccatga atcacctttg
64261 ggggtaaccg agttacctgt aacaggttca gaccccgttg agatacaaac acaaggaggg
64321 gggtcaccat tatttcatca gatcccgtgg gtgtggtttc ctttattaaa gccatggtat
64381 ccctcagctg gcgcataccc tcgcaaaact ggtgatactt agtaggggta tgtatattag
64441 cgctaaaacg gcaagatttt aattccacta taaaacaaac ggtctttccg gcaccactgg
64501 attccgtttg tataatacaa acacaatcgg ggcgtcggcg tcccaaattt acttcaaacg
64561 acattgatat gcgtacagcc ctttgaacat ccacgtggga taacggcgac aggagttttg
64621 ccagcctcgg gttgaacgcg tccgcgaaac ctcgacgtac gttatcaata tccttttga
64681 gtacatcgta aaaacgagtg tggcaacgtt gtcccaaacg aaaacacttg gcccgaattc
64741 gactagcgga catatttgaa gttccgtccc agaagataac ctaagacgcg tttgtctaca
64801 ataaacatgt caacggataa aaccgatgta aaaatgggcg ttttgcgtat ttatttggac
64861 ggggcgtatg gaattggaaa aacaaccgcc gccgaagaat ttttacacca ctttgcaata
64921 acaccaaacc ggatcttact cattggggag cccctgtcgt attggcgtaa ccttgcaggg
64981 gaggacgcca tttgcggaat ttacggaaca caaactcgcc gtcttaatgg agacgtttcg
65041 cctgaagacg cacaacgcct cacggctcat tttcagagcc tgttctgttc tccgcatgca
65101 attatgcatg cgaaaatctc ggcattgatg gacacaagta catcggatct cgtacaagta
65161 aataaggagc cgtataaaat tatgttatcc gaccgacacc caatcgcctc aactatatgt
65221 tttcccttgt ccagatactt agtgggagat atgtccccag cggcgcttcc tgggttattg
65281 tttacgcttc ccgctgaacc ccccgggacc aacttggtag tttgtaccgt ttcactcccc
65341 agtcatttat ccagagtaag caaacgggcc agaccgggag aaacggttaa tctgccgttt
65401 gttatggttc tgagaaatgt atatataatg cttattaata caattatatt tcttaaaact
65461 aacaactggc acgcgggctg gaacacactg tcattttgta atgatgtatt taaacagaaa
65521 ttacaaaaat ccgagtgtat aaaactacgc gaagtacctg ggattgaaga cacgttattc
65581 gccgtgctta aacttccgga gctttgcgga gagtttggaa atattctgcc gttatgggca

65641 tggggaatgg agacccttтc aaactgctca cgaagcatgt ctccgttcgt attatcgtta
65701 gaacagacac cccagcatgc ggcacaagaa ctaaaaactc tgctacccca gatgaccccg
65761 gcaaacatgt cctccggtgc atggaatata ttgaaagagc ttgttaatgc cgttcaggac
65821 aacacttcct aaatatacct agtatttacg tatgtaccag taaaaagatg atacacattg
65881 tcatactcgc gtgtacgtgt ttttcttttt tatatatgcg tcatttatta ccacatcctt
65941 taatcccgcc tttatctccc taaaacggag tggtaatatt aaaagccgcc aagcctgttg
66001 gtgggtgagg aggggtaaag gcacgctgtg tgcataacgt tgcggtgata ttgtagcgca
66061 agtaacagcg actatgtttg cgctagtttt agcggtggta attcttcctc tttggaccac
66121 ggctaataaa tcttacgtaa caccaacccc tgcgactcgc tctatcggac atatgtctgc
66181 tcttctacga gaatattccg accgtaatat gtctctgaaa ttagaagcct tttatcctac
66241 tggtttcgat gaagaactca ttaaatcact tcactgggga aatgatagaa aacacgtttt
66301 cttggttatt gttaaggtta accctacaac acacgaagga gacgtcgggc tggttatatt
66361 tccaaaatac ttgttatcgc cataccattt caaagcagaa catcgagcac cgtttcctgc
66421 tggacgtttt ggatttctta gtcaccctgt gacacccgac gtgagcttct ttgacagttc
66481 gtttgcgccg tatttaacta cgcaacatct tgttgcgttt actacgttcc caccaaaccc
66541 ccttgtatgg catttggaaa gagctgagac cgcagcaact gcagaaaggc cgtttggggt
66601 aagtctttta cccgctcgcc caacagtccc caagaatact attctggaac ataaagcgca
66661 ttttgctaca tgggatgccc ttgcccgaca tacttttttt tctgccgaag caattatcac
66721 caactcaacg ttgagaatac acgttcccct ttttgggtcg gtatggccaa ttcgatactg
66781 ggccaccggt tcggtgcttc tcacaagcga ctcgggtcgt gtggaagtaa atattggtgt
66841 aggatttatg agctcgctca tttctttatc ctctggacca ccgatagaat taattgttgt
66901 accacataca gtaaaactga acgcggttac aagcgacacc acatggttcc agctaaatcc
66961 accgggtccg gatccggggc catcttatcg agtttattta cttggacgtg ggttggatat
67021 gaatttttca aagcatgcta cggtcgatat atgcgcatat cccgaagaga gtttggatta
67081 ccgctatcat ttatccatgg cccacacgga ggctctgcgg atgacaacga aggcggatca
67141 acatgacata aacgaggaaa gctattacca tatcgccgca agaatagcca catcaatttt
67201 tgcgttgtcg gaaatgggcc gtaccacaga atattttctg ttagatgaga tcgtagatgt
67261 tcagtatcaa ttaaaattcc ttaattacat tttaatgcgg ataggagcag gagctcatcc
67321 caacactata tccggaacct cggatctgat ctttgccgat ccatcgcagc ttcatgacga
67381 actttcactt ctttttggtc aggtaaaacc cgcaaatgtc gattatttta tttcatatga
67441 tgaagcccgt gatcaactaa agaccgcata cgcgctttcc cgtggtcaag accatgtgaa
67501 tgcactttct ctcgccaggc gtgttataat gagcatatac aaggggctgc ttgtgaagca
67561 aaatttaaat gctacagaga ggcaggcttt atttttgcc tcaatgattt tattaaattt
67621 ccgcgaagga ctagaaaatt catctcgggt attagacggt cgcacaactt tgcttttaat
67681 gacatccatg tgtacggcag ctcacgccac gcaagcagca cttaacatac aagaaggcct
67741 ggcatactta aatccttcaa aacacatgtt tacaatacca aacgtataca gtccttgtat
67801 gggttccctt cgtacagacc tcacggaaga gattcatgtt atgaatctcc tgtcggcaat
67861 accaacacgc ccaggactta acgaggtatt gcatacccaa ctagacgaat ctgaaatatt
67921 cgacgcggca tttaaaacca tgatgatttt taccacatgg actgccaaag atttgcatat
67981 actccacacc catgtaccag aagtatttac gtgtcaagat gcagccgcgc gtaacggaga
68041 atatgtgctc attcttccag ctgtccaggg acacagttat gtgattacac gaaacaaacc
68101 tcaaaggggt ttggtatatt ccctggcaga tgtggatgta tataacccca tatccgttgt
68161 ttatttaagc agggatactt gcgtgtctga acatggtgtc atagagacgg tcgcactgcc
68221 ccatccggac aatttaaaag aatgtttgta ttgcggaagt gtttttctta ggtatctaac

68281 cacgggggcg attatggata taattattat tgacagcaaa gatacagaac gacaactagc
68341 cgctatggga aactccacaa ttccaccctt caatccagac atgcacgggg atgactctaa
68401 ggctgtgttg ttgtttccaa acggaactgt ggtaacgctt ctaggattcg aacgacgaca
68461 agccatacga atgtcgggac aataccttgg ggcctcttta ggaggggcgt ttctggcggt
68521 agtggggttt ggtattatcg gatggatgtt atgtggaaat tcccgccttc gagaatataa
68581 taaaatacct ctgacataaa aaacatgtat aataaaaagt cactataaac gtattctcta
68641 caatacttta ttcgcgaata atacacacta cctttgggtt tttttcccgt ccccaaatgg
68701 tgtttggtgc actctaccaa aaaatagagc gcctaaatat gctatataac gcctcccagc
68761 aaaatacggt tcaaaggcat tacccgatat tgtattgtag tacagggcaa tgggaattga
68821 tgatcccaat aaacggcata gacgcacagc gccgttatag caggggtctc cagagtacag
68881 ggtatctaag taccgggata tctcatactc atgcctttcc gtgacagaaa catcaaccgg
68941 aacagtatcc gataaaccaa ctcctgtttt tgcaaggcgt aaaattcgca caccttcctt
69001 ttttgcaaga tgtgacgttt ccttgtaaca gggaagctgg gggagtggta agaacaacaa
69061 agtttcagcc aacgtgccaa taaagcccac ttccctcaag aggctgtttg ctgtatccac
69121 aatggtccgt attaaatctt gagcaacttg atccgtgtca tcatcactgg gtaacgcgtt
69181 aacataacta cgcgttaaat cttcaataac ggcataacaa ttaaacgctt cccaccgaga
69241 cagtatatat tgaacaatca cgaaccgttg acaggacgtc agatcacgtc cgtaagcatg
69301 cccgaaaaat ggaagttccc cccgttcgcc atataccgca acaactgcag tatatatcgt
69361 ctcacgggct tcattaagtt catcttcaag tccaggccat tttctggctt taaatataac
69421 ctcgtccgca aaaaaaaccg cacatgataa cgcgcggata caatgagtag tggctttatg
69481 gcgaggatcc caaatgtcca ttacccgggg gatggtccta atctgtacaa agttacttag
69541 tgtaatatga tcggacttct tacgccgtct aggctgtttc tcagaatacg gttcacccga
69601 aatcggcaca tcatctgctt ttacgtcttc cgtaaccaca tcagcagcgc gccgactaac
69661 aattatactt gttttttcat cgtcgttact tccgttaagc gcgtctcgta tctcgggcgt
69721 cccgtcgaat aatccactca ctagctcctg caaactttct ggtaactcca acatacgcat
69781 atacaccaat gaaaaactgg cttcgtttgg tacgtacata aagccatttg tggtattaat
69841 ggcggtgggt gttggaaaca attttagctt attctcgcgc gtaacatcta cccccgccac
69901 caatgttaaa tgcgtcacgg ggagggacac gagataatct gcgagcgtag ggtcctccac
69961 ttcaacatca aatgttccgc aaaggtcgcg atccaccgcc cccgatcccg ctgcaagtaa
70021 ggccactcga tccaaaaaca cgcagttatt attggatgat accgcccatg tcttcccggt
70081 gcgattgagc tcacttcgaa cgtaactggc aacagatctg tcaccgggtc cgaccccgcg
70141 aacaacatgt ccaaattttg cgatctcgcc tccatgtttg cggggtatgg aaattaagca
70201 tcccccgcat ataaaatacg ccctggtagc acgctcgtta aaataaaacg ttacgccgtt
70261 ataagatacg gttgaatgat atggaaattc catattaaag cgtttatcgg aacattaacc
70321 tcgaacttgc cgtcccgtga tcgtgtgatc gccaacctta ggtccacacc gaatatgaga
70381 aatatataac tacacgcaaa cattcaaaac accgtggtat cattaacgtc atatgaaaag
70441 atccaatcaa tccaatcaac cacacctcct accgtttagc acgtcagcta tgtgacatgc
70501 tccaaacata cgtaaacatt tagagagggt gttataacag tctgtcaggc ggggtatatt
70561 ctacataata caaggatcgg ctttaacttt gtcaacattt ttactttgga ctataaactg
70621 cgactgaacg ttatgaaccc accccaagcc cgcgtctcgg aacagacaaa ggacttgctt
70681 agcgttatgg ttaaccagca ccccgaagag gacgcaaaag tgtgtaaatc cagtgataat
70741 tcaccgcttt ataacaccat ggttatgtta tcgtatgggg gtgatacgga cttactatta
70801 agctctgcat gtacccgcac atctaccgta aacaggtcgg cgtttacgca acactccgtg
70861 ttttatatta tatccacggt gttgattcaa ccaatatgtt gtatcttctt ttttttttac

70921 tataaagcga cacgctgtat gctcttattc acagccgggt tacttctgac gattctacat
70981 cactttcgac ttattattat gttattgtgt gtctacagaa atatacgatc agacctgcta
71041 cccttatcta catcccagca actgctgctt ggaattattg ttgtgactcg aacaatgcta
71101 ttttgtatta cggcgtatta tactcttttt atagacaccc gggtgttctt tttgattacc
71161 ggacacttgc aaagtgaggt tatttttcca gatagcgttt caaaaatact tcctgtgtcg
71221 tggggtccaa gtccagccgt gttactggta atggcggcag ttatttacgc tatggactgt
71281 ttggtggaca cggtatcctt tattgggcca agggtgtggg tccgtgttat gttaaaaaca
71341 tctatttcgt tttagtccat ttcaataaat gtactataat tgttcagtct aaaaataatg
71401 ttgggtattt ataattaccg cccccgtgtt acttggaaac acccatacat atgttccact
71461 ctacatcaaa cttctcgcag ttttcttgtt cccgcacacg tttacacgtc cggattcaag
71521 tcgcaacgct gctgacaaaa tgacaacggt ttcatgtccc gctaacgtga ttactacaac
71581 ggaatctgat cgtattgctg ggttatttaa catcccagcg gggatcattc caactggaaa
71641 tgtgctgtca accatagagg tgtgtgcaca ccgttgcatt tttgattttt ttaaacaaat
71701 acgatcagat gataacagcc tttactcggc tcaattcgat attcttttgg ggacatactg
71761 caatacatta aactttgtgc gttttctaga acttggactg tctgtcgctt gcatctgtac
71821 taaatttccg gagctggctt acgtgcgaga tggcgttatt caatttgagg tacaacaacc
71881 catgatagca cgtgatggcc cacatcccgt cgatcagcct gttcataatt atatggttaa
71941 gcggatacac aagcgttcgt taagcgctgc gtttgcaatt gcatcggaag cgttgagttt
72001 gttaagtaac acatatgtcg atgggacaga gattgactca tcgttacgta taagagctat
72061 ccaacagatg gctcgtaatt tacgcaccgt tttggactca tttgaacgag gcactgccga
72121 tcaacttctt ggtgttctat tggagaaagc cccaccgcta tcgctgcttt caccaattaa
72181 taaattccaa cccgagggac atctaaatcg tgttgcacgc gcggccctac tttcggacct
72241 caaacgtaga gtctgtgcgg atatgttttt tatgacccga cacgccaggg aacctaggct
72301 gatctctgcg tatctgtcgg atatggtttc gtgcacccaa ccatcggtga tggtatcacg
72361 aataactcat acaaacactc gcggacggca ggttgacggt gtgttggtaa caacagcaac
72421 cttaaaacgg caactattac agggaatttt acaaattgac gacaccgccg ctgacgtacc
72481 agtaacatat ggcgaaatgg ttctacaggg gacaaacttg gtaaccgccc ttgtgatggg
72541 aaaggccgtc cgcggaatgg atgatgtagc ccgccatctc cttgatataa ccgaccctaa
72601 cacgttaaac ataccgtcta tacccccaca atccaactcc gattcaacga cagctgggct
72661 tccggttaac gcccgtgttc ctgcggattt agtgattgtt ggggataaac ttgtattctt
72721 agaagcatta gaacggcggg tctaccaagc tacgcgcgtt gcctaccctc ttattggaaa
72781 tatagatatt acgtttatca tgccaatggg agtgtttcag gcaaactcca tggacagata
72841 tacacgacac gccggcgatt tttcaactgt atccgaacag gatccacgtc aatttccacc
72901 ccaagggatt ttttttttata ataaagatgg gatattaaca cagttgactc ttcgtgatgc
72961 aatgggtacc atctgccaca gttcattgct tgatgtcgag gccacacttg ttgccctccg
73021 ccaacaacat ttagatcgtc agtgttattt tggtgtatac gtggccgagg gtacagagga
73081 cacattggat gttcaaatgg ggaggtttat ggaaacgtgg gcagatatga tgcctcatca
73141 ccctcattgg gtaaacgaac atttaacaat tctacagttt atagctccga gcaacccgcg
73201 tctaaggttt gaattaaacc ccgcctttga ttttttttgtt gcaccgggggg acgtagacct
73261 tcccggaccg cagcgtcccc cggaagccat gccaaccgtt aacgcaacat tacggattat
73321 caacggaaac attcccgtgc ctctatgtcc catttcattt cgagactgtc gcggaaccca
73381 actcggtttg ggaagacata caatgacccc ggcaaccatt aaagccgtaa aggatacatt
73441 tgaagaccgc gcatacccaa ctattttcta catgctagag gctgttattc atggaaacga
73501 aagaaacttc tgtgcgttac tgcgactgtt aacacagtgt attcgcgggt attgggagca

73561 atcccacagg gtggcatttg taaataactt tcacatgtta atgtacataa ctacatatct
73621 cggaaacggt gagcttcccg aagtctgtat taatatatat cgggatttac tgcagcatgt
73681 aagagcatta cgccaaacta taaccgattt tacaatacaa ggagagggcc ataacggcga
73741 gacctcggaa gcgctaaata acatccttac ggatgacacg tttattgcac ctattctatg
73801 ggattgtgat gcgttaatat accgtgatga agccgcccga gaccgactcc ccgcaattcg
73861 tgtaagcggg cgaaacggat accaagccct tcactttgtg gatatggccg ggcataactt
73921 ccaacgacgc gataatgtgt taatccacgg gagacccgtt cggggagaca cgggtcaggg
73981 tattcccatt actccacacc atgaccgtga atggggtatt ctctccaaga tttactacta
74041 tattgtcatt cctgcatttt cccgcggttc ctgttgtaca atgggcgtgc gttatgatcg
74101 cctataccct gcgttacagg cagttatcgt tccggaaatt cccgctgatg aagaagcccc
74161 aactacccca gaagatccaa gacaccctct tcacgcacac caactcgttc cgaactctct
74221 taacgtttac ttccataatg cacacctaac cgttgatggt gatgcattgc tcacactaca
74281 agagttaatg ggagatatgg ctgaacgaac gacggccatt ttagtatcaa gcgccccga
74341 tgcgggagcc gccacggcaa caaccagaaa tatgagaata tatgacggag cgctttacca
74401 tggccttatt atgatggcat atcaggcgta cgatgaaacc attgcaacgg gtacttttt
74461 ttatcccgtt ccggtcaacc ctctgtttgc atgtccggaa catttggcat cattgcgtgg
74521 aatgacaaat gctaggcggg ttttggcaaa aatggtacca ccaatccctc cttttctggg
74581 agccaaccac cacgcaacta tacgccaacc cgttgcctac catgtaacgc atagtaagtc
74641 ggattttaat actcttacat attctcttct tggagggtat tttaagttta caccaatatc
74701 tcttacacat caactacgaa cgggatttca ccccgggatt gcctttaccg tagtgcgcca
74761 ggatcgcttt gccacagagc aacttttata tgccgagcgt gcttctgaat cgtactttgt
74821 cggacaaatc caagtacacc atcatgatgc tattgggggg gtaaacttta ccctaaccca
74881 acccagagct cacgtggacc tgggagtcgg gtatacagct gtatgtgcca cagcagccct
74941 gcgatgccct ctcacggata tgggcaatac tgcccaaaat ctttttttt cacgaggagg
75001 agtgccaatg ttacatgata acgttaccga atcgttgcgt cgtataacag catcgggggg
75061 tcgcttaaat cccaccgaac ccctacccat cttcggcgga ctacgtcctg ctacatcggc
75121 aggaattgca cgagggcaag cctctgtgtg tgagtttgtg gccatgccgg tgtccactga
75181 cctacaatat tttagaactg catgcaatcc tagaggtcga gcatctggaa tgttatatat
75241 gggtgaccgt gacgccgaca tagaggctat aatgtttgat cacacacaat cggatgttgc
75301 ttatacagat cgagcaactc ttaacccatg ggcatcacaa aaacattcat acggtgacag
75361 gctatacaac ggaacataca accttacagg cgcttctcct atctacagcc catgctttaa
75421 gtttttttaca ccagcggagg ttaacactaa ttgtaataca ctggatcggc ttctaatgga
75481 ggcaaaggct gtggcgtcgc aaagctccac cgacactgaa tatcaattta aacgccctcc
75541 cggttctacc gaaatgacac aggatccgtg tggccttttt caagaagcat atccaccact
75601 atgctcaagc gatgcggcca tgttacgaac ggctcacgcg ggagaaaccg gggcagatga
75661 agttcactta gcccaatatc tgattcgaga cgcgtcgccc cttaggggat gtcttcctct
75721 tccgcgataa tttcaccacg cccacatacc cactcccaat aaaagccctg tagagcgcat
75781 tggcatctta cttgagattt ggatacgctc ggccgacttg gtctgtttca cgcttcctta
75841 aacaacatgg ctatgccatt tgagatagag gtattgttac caggagaact atccccggcg
75901 gaaacatctg cattacagaa atgtgaggga aaaattatta ccttctcaac cctgcgtcat
75961 cgagcttcac tggtggatat agcgctgtcg tcatattaca ttaacggtgc tccaccagac
76021 acgctctcgc tgttagaggc ataccgaatg cgattcgcgg cagttataac acgggtcatc
76081 ccgggaaagt tgttggcgca tgccattggc gtgggtactc ctacacccgg gttgtttatt
76141 caaaatacat cccccgttga tctttgtaat ggcgattaca tctgcttact tcctccggtt

76201 ttcgggtccg cagactcaat tcgcttggac tctgtaggac tggaaattgt tttcccttta
76261 accatccccc agaccttaat gcgagaaatc atcgccaaag tggttgcacg ggccgttgag
76321 cgcacggccg cgggtgctca aattttaccc cacgaagttc tacgaggcgc ggatgtcatt
76381 tgttacaatg gaaggcgtta tgaactcgaa acaaatttac aacatcggga cggatcggat
76441 gcggctattc gcacattggt tttaaatcta atgttttcca taaacgaggg atgtctgctt
76501 ttattggcgc tgattccaac tttgttagtc caaggagcac acgacggtta tgtaaattta
76561 ttgatacaaa cggccaattg cgttagagaa accggccagt taattaatat accgccaatg
76621 ccgcggattc aagacggcca tcgccgattt cccatatatg aaactatttc atcttggata
76681 tcaacatcat ctagactggg ggataccttg ggaactcgcg caattttacg cgtctgtgtg
76741 tttgatggac cctctactgt tcatccggga gaccgcacgg ccgtgattca agtgtaaaca
76801 ggtgttaata aaaacacaac cagtctagtt acatttcacg cgtcttgttt ttatttaata
76861 ggcataaaca cggaatccgg tatacatgaa ctgccaatat acacggacat aattaatgca
76921 accatcagat catctgacat tgttcccgtg gtacctttac ccgtgtaagt ttttgtgtct
76981 agattaccca taccgccttt aattacctct gtcaggttat ccaactgttt acatagatac
77041 tccacggggt ctacacctaa ctttactgtt agggatacaa gctcctgtga ggctattata
77101 tttccggagt taaatcgttt aacaaaatag tctacggccg gcgtttttg tttttgtaat
77161 aaaaaaaaag ggtacgccac gctacatccg ggaggtatgg aatgataaaa cagtaacact
77221 ggagcggaag atagcacgtt tccctttcg aggacagcaa actgttgtgc tatagccaac
77281 gatatggcaa ctgcagaatc ctggctgctg tttccctcta tagaaacgtg tacgtttgta
77341 aatgtattgg ggtgtaaagc gagtatgtgg cctaagcatt gagtaacgca acgccctatc
77401 tcactggaag acgtgccagt taaagctcta agaaaaaagt gctccaatcc aaatataatc
77461 caatccgact tataacgacc aacaatcgct acaccagtac cagacgctcg tgtatttgag
77521 gtaaatgcag ggtctacgta aacgtacaac actgacgata atatagcaca attcgcaacg
77581 gttgacggcc gatataaaat aaacctctca cgggcagttt ttgtaaataa tggccggtca
77641 aaccccacac ccccagaatt ctgtttacgc ccacctacaa tttcctgcac gaaggagtcg
77701 gccataaata aatctgcagt gcgccgcatg gctccatcca ttgtgatgaa aaccggctta
77761 tttaatacat aacacgaaca agctgtgaca tcgctatgtg ctaaaacacg cggcatgtga
77821 tcgtcgcata catatgtaac aacgtttaac aactgatccg acgatccacg taagttatac
77881 aaaaaacttg tacttgcttt tccggtattt gttgatgaaa caaaaataat tttacaattg
77941 gtttgattta aaaatccgac tatagtttgt acagcatcag gtcgaataaa attagcttca
78001 tccacaaaca gaagattaaa atcttgacct cggataccct ggaacgatag aaagatatat
78061 agttacccca ccaaagttta aatgtatcct taaataccac gtacgtaaaa aatgtttgaa
78121 tacgtacata tttctttttt ttttccagta caaccatatc cggtgtataa tggaagccca
78181 tttggcaaat gaaaccaaac atgcactttg gcataatgat cacacaaaag gattactaca
78241 cgttgtgata cctaacgcgg ggcttattgc ggccggaata gatcccgcat tactgatttt
78301 aaagaaaccc ggacaacgct tcaaggttga agtacaaaca agatatcatg ctacaggtca
78361 atgcgaaccg tggtgtcaag ttttcgccgc gtacattccc gataacgcct taacaaatct
78421 cttaatacca aaaacggaac catttgtttc acacgttttt tcggccacgc ataattcagg
78481 gggattgatt ttatcattgc ctgtttatct tagccccggt ttattctttg atgcatttaa
78541 cgttgtagcg atacgaataa atactggaaa ccgcaagcac cgtgatattt gtattatgta
78601 tgcagaacta atcccaaacg gaacgcgtta ttttgctgat ggacaacggg tacttttatt
78661 atgcaaacag ctgattgcgt atatccgatg cacccctcgt cttgcatcgt ctataaaaat
78721 atacgcagag catatggtgg cagccatggg tgaatcacac acgtcaaatg gggacaatat
78781 tggacccgtt tcatccataa tcgatcttga tcgacagtta acttctggag gtattgatga

78841 ctcccctgct gaaacacgca tacaggaaaa taatcgggac gtccttgagc taataaaacg
78901 ggccgtaaac attgttaact ccaggcaccc cgtccgacct tctagttccc gcgttgcatc
78961 tgggttgctt caaagtgcaa agggccacgg agcgcaaact tccaacacag atccgatcaa
79021 taacggttcc tttgatggcg tccttgagcc gcctggacaa gggcgattta cgggaaagaa
79081 aaacaattcg tccgccagca tcccaccttt acaagacgtt ctattgttta ccccagcttc
79141 gacagaaccc caaagtctta tggaatggtt cgacatctgt tatgcccaat tagttagcgg
79201 ggacactcca gcagatttct ggaaacggcg tcccctatca attgtaccgc gacattacgc
79261 agaatccccc agtccgttga ttgtagtatc ttacaacgga tcctctgcct ggggaggacg
79321 tattaccgga agtccaattt tatatcactc tgcacaggct attattgatg ctgcgtgtat
79381 aaatgcccgg gttgacaatc cccaaagcct acatgtgaca gctcgccaag agctagtcgc
79441 gcgtttaccg tttttggcta acgtcctaaa taatcaaacc cccttacccg cctttaaacc
79501 aggcgccgaa atgtttttaa accaggtatt taaacaagcg tgtgtgacat cgctaaccca
79561 aggtcttata acggagttac aaacgaaccc gactctacaa caactcatgg aatatgatat
79621 tgcagattct tcccaaacgg ttattgatga aattgtagcc cgcacaccag acctgattca
79681 gactatagtt tcggtgttaa cggaaatgtc aatggatgcg ttttataaca gctccttgat
79741 gtatgcggtt ttggcgtatc tgtcatctgt atatacacga ccacaaggtg gggggtatat
79801 accctacctt cacgcttcct tcccatgctg gttaggtaat cgttctatat atttatttga
79861 ctattataat tcaggagggg aaatacttaa gctttccaag gtccccgttc ccgtagcctt
79921 agaaaaggtt ggtattggta attccacaca actgaggggt aaatttatac gcagcgcgga
79981 tattgttgat attggaattt gttctaagta tttacccggt caatgttacg cgtacatttg
80041 tctaggattt aaccagcaat tacaatccat tttagtttta ccgggggggat ttgcggcatg
80101 tttttgtatt accgataccc tacaggcagc actacctgca tcgttaatcg gacctattct
80161 agacagattc tgcttctcta ttcccaaccc ccataaataa attagtgtca ctataaaaac
80221 ataacaccag aatctcttca tatgtaattt tacgtcattt ctcccgtttc cacccccctct
80281 taaaatataa aataaccggg tgggtggcat taaacccaca agtacccggg cggcaatccg
80341 ctagactgtt tttctgctca tggaattaca acgcatattt ccgctgtaca ccgctacggg
80401 tgcagcgcgc aaattaaccc ccgaggcagt tcagagactc tgcgatgcat taacgctgga
80461 tatgggatta tggaagtcca tcctgaccga tccccgggtg aaaataatgc gatcaactgc
80521 ttttataact ttaaggatcg ctccgtttat ccccccttcaa acggatacta ctaatattgc
80581 cgttgttgta gccacaattt acatcacgcg cccacgtcag atgaacttac ctccgaagac
80641 ttttcatgta attgtaaatt ttaattacga ggtctcgtac gcaatgacgg cgactttaag
80701 aatttatccg gttgaaaaca tagaccatgt ttttggagca acgtttaaga acccgatcgc
80761 gtaccccctt ccaacatcta ttccggatcc tcgagcagat cccacccccg cagatcttac
80821 accaacgcca aacttaagca actacttaca acccccgcgg cttccgaaaa atccatacgc
80881 atgtaaagtt atttctccgg gagtgtggtg gtcagacgaa cgaaggcgtt tatatgtact
80941 ggctatggaa cctaatttaa tagggctatg tcccgccgga tggcatgctc ggatacttgg
81001 ctctgtatta aatcgactcc tcagccatgc ggacggatgt gatgaatgta atcatagagt
81061 tcacgtgggg gcactgtatg cgttacccca tgtcacaaat catgcggaag gttgtgtgtg
81121 ttgggctccg tgtatgtgga gaaaggccgg tcagcgggaa ttaaaagtgg aggtagacat
81181 tggcgccacg caggttcttt ttgtagatgt caccacctgc attcgaatta cgagtactaa
81241 aaatcctcgc attaccgcaa atcttggcga cgttatagcg ggaaccaacg ccagtggtct
81301 ctctgtacca gtaaattcat ctgggtggca gctttatatg tttggagaaa cattaagccg
81361 ggctattatt aacggctgtg gtctgcttca gcgaatttgc ttccccgaga cacaaagatt
81421 atcgggtgaa ccggaaccta caaccaccta gtatacctta actcaaccgc cgttgtggaa

81481 aggtatatgt caacatttac agtaatatat taaaggttaa atttataaaa cactcacgtt
81541 tgtgttgtga cttgacgcga acaccgctgt gctgtaagac ccgtcggtaa atgaaaacgt
81601 aatagattcg ccttttacat gatccacgta atttgcccca aaccactgtt ccaggcgaga
81661 cttgataccc tcaaacacgg gttccgttgc tttgcgtata tgagccgtat aacccacttt
81721 aattcctcta aacgtggcca ttactaaagc tattaatggt acaagaaacc atgttttccc
81781 atgtctacgt ggtaccaaaa acacagttga tttttgtttg aagtgttcta aaacactgtc
81841 agaaacactt ggcgtgttaa acactgtacg cagaaagcag tcaactctgt cggcatgatc
81901 gcccaatagc accgatgaaa taaaatgcgt ggtgtgcatg aggatcattt tttgaaacag
81961 ttccaacgtc cccttatatc tgccatagat tggaacgtca acctttgcgc gtttgccatg
82021 acttccacac tcttcaatac tctcaaaaga tgtttccaca aggtacgaaa accgttgtgt
82081 aaaggtagac aactgacaga aactatccga cagagaaaac gcgcgaaatg tgttcataac
82141 accgctatac gcatttcgat gaggtgctgc ttcttccggt gaatattcat aaaactgtac
82201 actactgaca gccttttta attcagggct tacgtttgca tttaccgaat atcgccatgg
82261 tttcaaaact acattggggg tacagttgta ccctgttgac gatagaaacg cgccaaacat
82321 tgcccgtcga gcagtagccg agaacagtgg aatatattca caacagttgt gaagcgttcc
82381 aattccggga ataacggcct gatgacgtcg ggttacatct atagcaaaat tcagaaacgg
82441 gatttgggtt gcgtttccca gagacccttg ccgcgtggaa cacggggtag gggactccaa
82501 cgtcccaaag cgttcatccc tacgacgctt tagacgttca aaatatctta cagattcttc
82561 accaagcgta cgaccaaaca ttatcaatga catttaacat caattcacgg aatccgcctc
82621 atctcttgta agcagtaaaa caggaagccg cgtcatctta cgtactcgtt acgtatatat
82681 cataaacatt ttcagggccg cattcattca ctttggtcat gtcaggccac actccaacct
82741 acgcttctca taggcgtaac cgtgtcaaac tagttgaggc gcataaccgc gcggggttat
82801 ttaaagaacg gaccctcgat ctaatccgtg ggggtgcgag tgtacaagat ccagcatttg
82861 tgtatgcctt tactgctgca aaagaggcct gcgccgattt aaataaccag ctccgctctg
82921 cagctcgcat agcttcagtt gaacagaaga ttcgtgatat acaatccaag gttgaggaac
82981 aaacaagtat tcaacagatt ttaaatacaa acagacgcta tatagcaccc gattttattc
83041 gcggtttgga taaaacagaa gacgataata ccgataatat agacagactg gaagacgcgg
83101 taggaccgaa catcgaacac gaaaatcata cttggtttgg agaagacgac gaagcgttac
83161 ttacacaatg gatgctgacg acacaccccc caacctccaa atatctccaa ctgcaggacc
83221 tttgcgttcc caccacaata ccgacggaca tgaaccaaat gcaaccgcag ccgatcagca
83281 agaacgagaa tccaccaacc ccacacacgg atgtgtaaat catccatggg ccaatccgtc
83341 aactgcaaca tgcatggaat caccagaacg atcacaacag acaagcttat ttttattaaa
83401 gcacggctta acgagagatc caatacatca acgcgaaagg gtggacgttt ttccacaatt
83461 taacaaaccc ccatgggttt ttagaatttc caaattatcc cgtttaattg tacccatctt
83521 cacgctcaat gaacagttat gtttttctaa attacagatt cgagatagac ccaggtttgc
83581 gggacgggga acgtatgggc gtgttcatat atacccatcg tcaaaaatag ctgtaaaaac
83641 catggacagt cgtgtttttа atagagagtt aattaacgcg attttagcga gtgagggttc
83701 tatacgagca ggggaaaggc taggtatttc tagcatagtt tgccttttag gtttttcgtt
83761 acaaaccaaa cagctactgt ttccggcata cgacatggat atggatgaat acattgttcg
83821 cctgtccaga cggttgacaa tacctgatca catagacaga aaaattgccc atgtattttt
83881 agatttggct caagcgttga cgtttttaaa tcgaacgtgc ggcctgaccc acctagatgt
83941 gaaatgtggc aatatttttc ttaacgtcga caactttgcc tcgttggaaa taaccacagc
84001 agtaatcgga gactatagcc tagtaacatt aaatacgtat tccctttgta ctcgagcgat
84061 atttgaagtt ggaaatccat cccacccgga gcacgtacta cgcgtacccc gggatgcatc

84121 gcagatgtca tttcgtttgg tgttgagtca tggaacaaac caacccccctg aaatcttgct
84181 tgattatatt aatggaacgg gccttactaa atatactgga accttgcccc aaagagttgg
84241 acttgcgatt gatctttatg cattgggcca agcactctta gaagttatcc tgctaggacg
84301 tcttcccgga caactgccca tttcagtaca tcggaccccg cattatcact actacggtca
84361 taagttatca ccagatttgg cgcttgatac gctggcatat cgatgtgtcc tggcgccata
84421 tatactccca tctgacatcc ccggggactt aaattataat ccctttatac acgccggaga
84481 gctgaacacc cgtatttccc ggaattcttt acgccggata ttccagtgtc acgcagtgcg
84541 ttacggcgta acgcactcaa agcttttcga aggcatacgc attccggcct cattataccc
84601 agccactgtt gttacatcgt tgttgtgtca cgataattca gaaatacgct cggatcaccc
84661 tttattatgg cacgatcggg attggatagg atcgacataa gcccccagcc agccaaaaaa
84721 attgcccgtg tgggaggtct acagcaccct tttgtaaaaa cggatattaa cacgattaac
84781 gttgaacacc attttataga cacgctacag aagacatcac cgaacatgga ctgtcgcggg
84841 atgacagcgg gtatttttat tcgtttatcc cacatgtata aaattctaac aactctggag
84901 tctccaaatg atgtaaccta cacaacaccc ggttctacca acgcactgtt ctttaagacg
84961 tccacacagc ctcaggagcc gcgtccggaa gagttagcat ccaaattaac ccaagacgac
85021 attaaacgta ttctattaac aatagaatcg gagactcgtg gtcagggcga caatgccatt
85081 tggacactac tcagacgaaa tttaatcacc gcatcaactc ttaaatggag tgtatctgga
85141 cccgtcattc cacctcagtg gttttaccac cataacacta cagacacata cggtgatgcg
85201 gcggcaatgg cgtttggaaa aaccaacgaa ccggcggcac gagcgatagt tgaagcattg
85261 tttatagatc cggctgatat ccgtactcct gatcatttaa cgccagaagc tacaactaag
85321 ttttttaatt ttgacatgct caataccaaa tctccaagtc tccttgtggg tacaccaaga
85381 atcggaacgt atgaatgtgg acttttaatc gacgttcgaa cgggacttat aggcgcgtcg
85441 ttggacgttc ttgtatgtga cagggaccct ttaactggca ccctaaatcc ccaccctgca
85501 gaaaccgaca tttcattttt tgaaattaaa tgtcgtgcta aatacctctt tgatccagat
85561 gacaaaaata acccgctcgg tcggacgtac accacgttaa taaatagacc tacaatggca
85621 aatctacggg acttttttata tactataaaa aacccatgtg taagcttctt tggaccctca
85681 gcaaacccaa gtacacgcga ggccttaata acggatcacg ttgaatggaa acgtttagga
85741 tttaaaggtg ggagggccct tacagaactc gacgcccatc atttgggcct caatcggaca
85801 atctcatccc gagtgtgggt atttaatgat ccggacatac aaaaggggac aattacaacc
85861 attgcatggg ccactggaga tacggctctt caaattcctg tatttgccaa tccgcggcac
85921 gctaacttta aacaaattgc cgtacaaacc tatgtattat ccggttactt tccagcgcta
85981 aaactacggc ccttccttgt caccttttata ggacgtgtgc gccgaccaca cgaggtggga
86041 gtcccattgc gcgtcgatac acaagcggct gccatttacg aatataactg gccgactatc
86101 ccacccccact gtgcggttcc ggttatagcc gttctaacgc ctatcgaagt tgatgtgcct
86161 agagtgacac aaatacttaa agacacagga aacaacgcga ttacatcagc attgcggtca
86221 ttgcgatggg acaatcttca tccagcggtc gaggaggaat ctgtggattg tgcaaacggt
86281 acaacgagct tgttacgtgc aacggagaaa ccgttgcttt gaactcagag ttctttgaag
86341 actttgactt tgatgagaat gtaacagagg acgccgataa atccacacaa cgccgcccac
86401 gagtgatcga tgtaacacca aaacgaaaac cttcgggaaa gagctcccat tccaaatgcg
86461 caaaatgtta aaccctgata aaccctgata aacgttctaa taaaaacatc aaatcatggt
86521 tggttactgt gaatgtttgt tttattgctt gggggtttac aagtacaacc cacgctactc
86581 ccacccactg tttgatcgct cgtataacag ctcatcctcg cggtccgttt catatgttga
86641 gtcattttca tagacgtagc cgtagccttg tgatgggtaa tttgtgcggc gagaatttct
86701 atgtgcaggt tttacttttc gtatgtatcc ccgtacccgc tcgggtactc ttcttacggc

86761 accgtagaac cgactgcgtt tctgtcgatg atacacatat gcacgcatca atctgagaag
86821 caacatgaca acggaaaaca cggccaggca agccaaggtt ccccgagttg tgggaattaa
86881 ccgtggagat tgaaccgata tagggtcata taatcggtcc atatacgagt gcgcggcggt
86941 tcccaacgta gcacaggcca cgagcgttcc cagggacggt cctattaaca cgtgtatata
87001 atgcgccaaa attaattctg atactataag atatacaact gacaatgtac taaatgtaga
87061 catggccacg gacaccgatg accacagtcc cgtatgtaga tgattcgcca ccacaagttc
87121 cagcattaat gatacaaata ggatacatat cgccatcaac gcagccatca aattcacgaa
87181 cactgcgcgc gtaggccccg caaggcgata taaaaagacg ctctgctgtc gtaaatttgc
87241 gaccgctttt atgttcgttt cgtccaattt tccgcgtcca caaaaatacg ttgtaaatat
87301 tacacttgtc gcaaaatgtc caagatataa tgtagcagcc acgccgattt gcttgtaagc
87361 taataataac acaacggcgt ttaataacca caatgacaaa agaccccaaa aaagtgttgt
87421 gggatctaca actaaccatg caacaccgga gctttgccgg acacgttgat ttttcgtttc
87481 tcggtgtata atcgcggccg tgatcagtgt atataccgcc atggccattg ccgttaaagc
87541 cgtgtagtaa gtaaatgcca caacgctatg tggttccaaa aacaaaaccg gggcgctgta
87601 tccacctcta tttccggacc ataccccccc atctagggtg gcgttaaata actcataatc
87661 aactacggca gcataaaaac aagggatccc ggtatattca gaagaggcgg caattaacgt
87721 agccaggagc attaccgcac ccaaagtgaa catcatcacc tgaattatcc aaattcgcca
87781 attaagcgta tccatttgat gatctaacgc ttccacctcg ggtgtcgtgg tgtcgtacgg
87841 cgagactttt tcagaacgcg gccccttctt ttgagttccc atgtctccca acaccgggga
87901 gagcaacgcc gccgtctatg cgtccagtac acagctcgcg cgggcgttat atggagggga
87961 tctggtttcg tggattaaac acacccaccc gggaattagc ctggaactgc aattggatgt
88021 tccagtaaaa ctaataaaac ctggtatgtc acaaactcgc ccggtaaccg tcgtacgtgc
88081 ccctatgggc tctggtaaaa caacagcctt gcttgagtgg cttcaacacg cgttaaaggc
88141 agatattagc gtactggttg tctcatgtcg ccgtagcttt acccagacgt tgattcaacg
88201 gtttaacgat gcaggcctct ccggattcgt aacatatttg acatccgaga catatattat
88261 gggttttaaa cgtttgattg tgcaacttga aagcctacac cgcgtatcca gcgaagctat
88321 cgacagctac gacgtattaa tactggatga ggtaatgtca gtgattggac aattatactc
88381 ccccacaatg agacgtcttt ccgcggttga tagcctatta tatcgtcttt taaatcgctg
88441 ttctcaaatt atcgcgatgg atgctacagt aaactcgcag tttattgatt taatctccgg
88501 attgcgtgga gatgaaaaca tacacacaat tgtgtgtaca tacgcgggag ttgggttctc
88561 cggaagaact tgcacgatcc tgcgtgatat gggcatcgac acgcttgtgc gagtcattaa
88621 acgatctcct gaacacgagg atgtacgtac catacaccaa ctacgtggaa catttttga
88681 cgaactagca ctacgattac aatgtgggca taacatctgt atattttcat caactttatc
88741 gttttcggag ctagttgctc agttttgtgc aatatttaca gactctattc ttattttaaa
88801 ctcaactcgg cccctatgta atgtaaacga atggaaacat tttcgcgtgt tggtgtacac
88861 taccgtcgtg accgttggat tgagttttga catggctcat tttcatagca tgtttgctta
88921 cataaagcca atgtcatatg ggccggatat ggtatcggtc taccagtcat tagggcgtgt
88981 acgtttattg ctacttaatg aagttttgat gtacgtcgat ggctcaagga ccagatgcgg
89041 acccctgttc tcgccaatgt tactaaactt taccatcgca aataaatttc aatggtttcc
89101 tacacacacc caaataacta acaaactgtg ctgtgcattt aggcaacgat gtgcaaatgc
89161 atttacacgc tcgaacaccc atctcttctc aagatttaaa tacaaacacc ttttcgagag
89221 atgctctctt tggagtttag ccgatagcat taatatctta caaactcttt tggcctctaa
89281 ccaaattttg gttgtattgg atggcatggg tccaataacg gacgtttccc cagttcaatt
89341 ttgtgcattt atacacgatc tcagacatag cgctaacgcc gtagcttcct gtatgcgttc

89401 tcttagacag gacaatgaca gctgcttgac cgattttggc ccttccggat ttatggccga
89461 taacattacc gcgtttatgg aaaagtatct tatggagtca attaataccg aagaacaaat
89521 taaagtattt aaagcccttg catgtccaat agaacagcct agactagtca atacggcaat
89581 attgggggcg tgtatacgaa tacctgaagc gttggaagca tttgacgtat ttcaaaaaat
89641 atacacgcac tacgcttccg gttggtttcc cgtcctggac aaaaccgggg aatttagcat
89701 cgcgactata actaccgccc caaatttaac cacacattgg gagctgtttc gccgttgtgc
89761 ctatattgca aaaacactca agtggaatcc gtccaccgaa ggctgtgtaa cacaagtttt
89821 ggatacggac attaatacac ttttcaatca acacggggat tcgctggctc aactaatatt
89881 tgaggttatg cgctgtaacg ttactgacgc taagattata ttaaaccgcc cggtttggcg
89941 aacaaccgga ttcttagatg gatgccataa tcaatgcttc cgtccaatcc ctacaaaaca
90001 cgaatataac attgctctat ttcgtttaat ttgggaacaa ttatttggcg cccgcgtaac
90061 taaaagtacc cagacctttc cgggaagtac tcgtgtgaaa aacctaaaaa aaaaagatct
90121 agaaacttta cttgattcaa ttaacgtgga tcgttctgca tgtcgtacct accgccagtt
90181 gtataacctg cttatgagcc agcgccattc gttctctcaa cagcgttaca aaattactgc
90241 ccccgcttgg gcacgccacg tgtattttca agcacatcaa atgcacttgg ccccgcatgc
90301 cgaagccatg ctacaattag cgctatcgga actgtccccg ggatcgtggc cgcggataaa
90361 cggggcggta aattttgaaa gtttataacc cgttaatacc atatatggac atccataggg
90421 ggggttacat aaatactaag cctctgtaca acacaaaggg cctctaacaa tgcactgaac
90481 cacaaccaag ctatggacgc aacgcagatt accttggtta gagaaagcgg acacatttgt
90541 gccgcaagca tatacacatc ctggacacag tccggacaat taacacagaa cggtctttcc
90601 gtgttatact acttattatg caaaaactca tgtgggaaat acgtccctaa gtttgccgaa
90661 attaccgtac aacaagagga tttatgtcgc tactccaggc atgggggggag tgtttctgcg
90721 gcaacgtttg cgtctatctg cagggcggcg tcctcggctg cgttagacgc ctggcccctt
90781 gaaccactgg gtaacgcaga cacctggcgt tgtctccatg gcactgccct ggccacttta
90841 cggcgcgtat tagggtttaa atcgttttat tcgccagtaa cattcgagac tgatacgaat
90901 acaggtcttc tgttaaaaac aatccccgat gaacacgcgt tgaataatga caacacgcca
90961 tctaccggag tattgagggc taattttccc gtggccattg atgtttcagc agtcagcgca
91021 tgtaacgccc acacgcaagg tacgtcgcta gcctacgccc gcctgaccgc acttaaatct
91081 aacggtgaca cccagcaaca aacaccttta gacgtggagg taattacacc aaaggcctac
91141 atacgtcgga aatataagtc tacgttttcc ccccctatag agcgggaagg ccaaacctcc
91201 gatttgttta accttgaaga acgccgcttg gttcttagtg gcaatcgcgc aattgtggta
91261 agggtactct taccgtgtta ttttgactgt ttaacaacgg attccaccgt tacatcttcc
91321 ctttcaatat tagcaacata tagactgtgg tacgcggcgg cgtttggaaa acccggggtt
91381 gtccgtccaa tctttgcgta tttaggcccg gaactcaatc cgaagggtga agacagagac
91441 tacttttgta ctgtcggatt tcccggatgg accactcttc ggacacaaac tccagccgtc
91501 gaatctattc gcacggctac ggagatgtac atggaaacgg atgggttgtg gccagtaacc
91561 ggtattcagg cctttcatta tctagccccc tggggacagc atccccccctt acctccgcgg
91621 gtgcaggatc ttattgggca aatccctcaa gatactggac atgcagatgc aactgtcaat
91681 tgggacgcgg gccggatatc taccgtcttc aaacagcctg tacaactaca agatcgttgg
91741 atggcaaagt ttgatttcag cgccttttttt cccacgatat actgcgctat gttccccatg
91801 cattttagat taggcaaaat cgtcctggct agaatgcgtc gaggaatggg gtgcctaaaa
91861 cccgcgttgg tgtctttttt tgggggggtta cggcacatac tcccgagtat atacaaagct
91921 attattttta tagccaatga aattagcctt tgcgtcgaac aaacggcctt ggaacagggc
91981 tttgctatat gtacttatat aaaagatgga ttttggggaa tcttcaccga tttacatacg

92041 cgcaatgtat gttcagatca ggcacgttgt tcggccttaa atttagcggc cacctgcgaa
92101 agagcagtca cgggcttatt acgaattcaa ctaggtctta actttacacc cgccatggaa
92161 ccggtactcc gggtcgaggg tgtgtacact cacgcattta cctggtgtac cacgggaagc
92221 tggctgtgga atttacaaac aaacacgcct ccggatttag ttggcgtgcc atggcgaagt
92281 caggcggcgc gagatttaaa ggagcgtctt tcaggactcc tatgtaccgc aacaaaaatt
92341 cgagaacgga tacaggaaaa ttgcatatgg gaccatgtcc tatacgacat atgggccgga
92401 caagttgtgg aggctgccag aaaaacatac gtcgattttt ttgaacatgt ttttgatcgc
92461 cgttatactc cggtatactg gagtcttcag gagcaaaatt cggaaacaaa agcaataccg
92521 gcatcttatc tgacatacgg acacatgcaa gataaggatt ataaaccaag acagataatt
92581 atggttcgta atcccaaccc acatggacct cctactgttg tttactggga attgctacca
92641 tcgtgtgcct gtattccccc catagactgc gctgctcatc tcaagcccct tatacacacg
92701 tttgtcacta ttattaacca tcttctagat gctcataatg atttttcaag tccatcattg
92761 aaatttactg acgatcccct tgcttcatat aacttcttgt ttttatgaca aaaaaacacg
92821 ccgcaacaac ccatccttaa aataaaaggt ttatttactt tacaacccgt ggtgaatttt
92881 tatacgtttc aaataactga acatttttcg gtgttaccat ggtgcgattt aaccaccaaa
92941 aatatacgct cttctgatat tccgaatctc gtaaaggtcc atttaacaat cccgggggta
93001 cttgcaccac accatctgga caggggggg ttccgtgggg caggtcaaaa cgctgaccca
93061 ccccacatga atatatagcc tttataatat tgggggccgt tccaggctga gggttcagta
93121 acttaacaaa catataatgc ggcaatacgc gggtttttgt aaaggggttg ttatcaacga
93181 catacattag agtgtttaac aaccataaaa ctccctcata taaaaaccga cgcatttttt
93241 ccaaaggtcc tatttgacac tcaacgcgtc taagatatac agacaattgt acaaacagcg
93301 atggagatgc cccggagggc ccaatgcctt ccagatacat taaaataaca cataaggtaa
93361 aatctaggac attatccggg cggaatagag tcatccgata gattaacagg cgcggaggca
93421 cccccaccgt atacacccta tcttcaaccg cagttaatac ggaaaaaata aatccgcgga
93481 acgctggttg agtaacacac tccatgtagt aacgatcaca ggacacctca cttgaatcac
93541 cattcaacac tactaaaacg gtctcttggt gttccggttt tacgcgcagt gatacaacag
93601 agtttgccaa aaagcgtggc ttcaaaccgg ttacctcccg cgcctcgcat acgaatcttg
93661 gtattgcttg tattctaaga tcttcgatca cgtcgctcac atccaacccc tcttcggctc
93721 gtgttagtaa gttgtcgatc gttacgctgc aacctaaaat gctgggtata tttattccgg
93781 acatcccatc ggccatcccc gcgcctccgg tttgctcgaa ttttatccag taaggtcgaa
93841 tccgctgcat ttaccttgtg tacccgtaac ctctcagggg ggtgtccttt cataaaatgg
93901 gataggtttt tatatccaac atgcatgtat tggttattta ttttattggg ttccgggatt
93961 ctttcgtcat cttctgtagg gtcaggcaaa ccccaggaag gacttggtgt tctccgtggg
94021 ccccgtttta ttacctctgc gcgaacctgc atttcatata atattcggat ttgggataaa
94081 taggactctg ttctcgcctt tttaaaaata gcctggcata actcttcctc tgacctatgt
94141 acctcgcttt gagttaccaa gaatcctaat cgggtggccc gtaatatgaa tgaaaaatac
94201 ggcgcaacta gtaatgagat tgacgcattt gaatatgata cagaaatttc ctggccttga
94261 ttattgttta cccggtgaag cttaaaacag cgaacaagtt cctgtttcca tagctcagac
94321 aaacgtttta tatcatctcc ataaggggggg atataacgag attgaaaact attggcaata
94381 tatgcatcat cccctattat gccggtaaga tctataacct cgtgatttaa atcggcaata
94441 cgtgtttctt ctgccattgt aatatgtgac cctttagatg gctttatttt taccctctct
94501 tcccgtaacc gtttcagctc tccttctttg aactggagcc tttcggtcag atcgctgttc
94561 acatccttga gaccctcaat ggttttgaat aaattattca cataaccctc gagcatgccg
94621 ttgatactgt taaccaccga agttttaaac gcactttgaa cgtttgttgt tccggacatt

94681 gccccccgt taaaggattg gttggccttg ccaaaccccg gttgtgatgt gtccaccgat
94741 ccacttcctt ccagaatgtg attgcccgtt tcttctagat aggaacgtac ggtttcggta
94801 atatctccaa catgtctcat gttttttaag ttaactatta gctttacaag tctagacgcg
94861 gccgatccag cccgtgttgt atcgttctcg cccattatac gatcaaccgc acgtgtgctg
94921 tgagatctat catcttcatt ccggcgacct attaacacgc gcaaaggggc tgtatttaaa
94981 acttggcaga cgcgagcatg ttcacgtaat gcataacagg ccaacacctc cccagaaagc
95041 cgctgtaagg gtgagtcaaa tactacaccc tccccacata caacgggcgg ccacacgacc
95101 aaacactctc ccttcatgcc cgttacatca tcctttgcca taattaatct tcggttataa
95161 ttataataaa gacgcgtcct atcataatcc ataatagcaa cattttgcat acactcaact
95221 aggcttgtga caaccgccgc tcctctggcc aacgttgcat cggcaacttt taacatctgg
95281 gacagttctg ccgcttgacc catatacgta tttaatggtg caggggttcc attctgttct
95341 gatcgtacct ttcttacaac gggcacaata cctacacagg ctatccagtc cacgtatttg
95401 gcaaaaccga cccttccatt taaaccactg gtatagagac aaccggttat tccacgcaga
95461 aactcaagta acgatgactg taatgtttga cgccaggttt caaaaacctg atgtgcaagc
95521 cgtacggctt ctgattctcc acatagccca taacgttccg ctagagcccc ggcatgcagg
95581 ttacattgtt ggatgtggtg ttcccaatct gctgctaggt cctcataccg agttgcatcc
95641 aacgcgttca tcaaaacggt tgcctgaact tggcgaatta cagtttccgt agaccgtaca
95701 gcgctatata tgccttgtcc atcggtatat ccaaagtcac cggctaggat ttttcgaaac
95761 aacatacttt gcgtggttgg gtgtattaac atccagccat cttcctccgg aaatgtacaa
95821 aaccctatat ccggggcgta ctcattccag tatatatcga acatgttctt gtattggtca
95881 tttgggttac ttccattcaa gccctggtca atagaaacag aacttgctat ccttttttct
95941 tcactaccgg aactgttatt aaaaagagac gttatttcgg ccattgaaaa ccacgatgaa
96001 aagatcaatt tctgtagaca gttcttcacc caaaaacgtt tttaatccag agacgcccaa
96061 tggatttgat gacagtgtat atttaaactt cacctctatg catagcattc aacctatcct
96121 ctcacggatt cgagaacttg ccgcaattac gattccaaaa gaacgtgttc cgcggttgtg
96181 ttggtttaaa cagttactcg aactgcaagc gcctcctgaa atgcagagga atgagctccc
96241 cttctccgtt tatttaatta gcggaaatgc cggctccgga aaaagcacgt gtatccaaac
96301 gcttaacgaa gctatcgatt gcattattac cggatccacc agggttgctg cccaaaatgt
96361 tcatgctaag ttatcaacgg cttatgcgag tcgtccgata aacacaatct ttcatgaatt
96421 tggttttcgc ggaaatcaca ttcaggctca gctgggccgt tacgcatata actggactac
96481 gacccccccc tctattgagg acctgcaaaa aagagatatt gtatactact gggaagtttt
96541 aattgatata acaaaacgag tgtttcaaat gggggacgac ggtcgcggag gaacatcgac
96601 atttaaaacc ctgtgggcaa ttgaacgttt gcttaataaa cctacaggct caatgtccgg
96661 aaccgcgttt atcgcatgcg gttcccttcc ggcttttacc cggagcaacg ttattgttat
96721 tgatgaagca ggattgctag ggcgtcatat tctcacggcc gttgtttact gttggtggct
96781 tttgaatgct atatatcaaa gccctcagta cataaacggt cgaaaaccgg tcatagtatg
96841 cgtcggttcg cccacccaaa ctgactcgtt agaatctcat tttcaacatg acatgcagcg
96901 ttcacacgta actcctagtg aaaatatact cacgtatata atctgcaatc aaactctgcg
96961 tcaatatact aacatctcac ataactgggc aatctttatt aataacaaac gatgtcaaga
97021 ggacgatttt ggaaatcttt taaaaacgct tgagtacggg ctacctatta ccgaagcaca
97081 tgcgcgtctg gtcgatacat ttgttgtacc tgcatcctat attaacaatc ctgctaatct
97141 tcccggatgg acgcgtctgt attcgtcgca taaggaggtg agcgcgtata tgagtaagtt
97201 acacgcgcat ttaaaactat cgaaaaatga ccatttttct gtgtttgcct taccgactta
97261 tacattcatc cggctaacgg catttgatga ataccgcaaa ttaacgggac aacccggact

97321 ttctgttgaa cattggatac gggcaaactc cggtcgtttg cacaattatt cccaaagccg
97381 agatcatgac atgggaacag ttaaatacga aacacattca aatcgcgact taattgtagc
97441 ccgtacagac atcacttacg tgctaaatag tctcgtagtt gtaaccacaa gactacgtaa
97501 gttagttatt ggattcagtg gtacatttca atcgtttgca aaggttttac gtgacgactc
97561 ctttgtgaag gctcgaggag agacatccat cgaatatgct taccggtttc tgtcaaacct
97621 aatctttgga ggcttgatta acttttacaa ttttttgtta aataaaaacc tacatcccga
97681 taaggtatcg ttagcataca aacggttagc tgccttaacc ctggagttat tgtctggaac
97741 aaacaaagcc cccttacacg aagcagcggt taatggggcg ggtgccggga ttgactgtga
97801 tggtgcagct acttctgccg ataaagcctt ctgctttacc aaagcccccg agtccaaagt
97861 aacggcctcc atacccgaag acccggatga tgtaattttt acggcactta acgacgaggt
97921 tattgacttg gtatactgcc agtacgaatt ttcctatccc aaatcatcca atgaggtcca
97981 tgctcagttt ctgttaatga aagctattta cgatggtcga tatgccatat tagcagagct
98041 tttcgaaagc agctttacaa ccgccccctt tagcgcgtat gtcgataatg ttaatttcaa
98101 cggaagcgag cttttgatcg gcaatgtgcg ggggggggctg ttatctttgg cattacaaac
98161 agatacgtat acccttttgg ggtatacttt tgcacccgtg ccagtctttg tagaggaact
98221 gacccgaaaa aagctgtacc gcgaaactac cgaaatgtta tatgctctac acgtacctct
98281 tatggtctta caggatcaac atgggtttgt gtccatcgta aacgctaacg tatgtgaatt
98341 taccgagtct atagaggatg cagaattggc aatggccacc acggtggact atggccttag
98401 ttctaaacta gccatgacaa ttgcacgctc acagggtctg agtttagaga aggtagctat
98461 ctgttttacg gcggataaac tgcgcctaaa tagtgtgtat gttgccatgt cgcgtacggt
98521 ctcctctagg ttcttaaaaa tgaatctaaa ccctctacgg gaacgatatg aaaaatccgc
98581 agaaattagc gatcacattc ttgccgctct acgtgatccc aacgtacacg ttgtgtatta
98641 aagcattgta taaaaacacg catgcgggct tgctgttctc atttctaggt tttgtcttaa
98701 atacacccgc catgagcatc tctggacccc caacgacgtt tattttatat aggttacatg
98761 gggttaggcg ggttcttcac tggactttac cggatcatga acaaacactc tacgcattta
98821 cgggtgggtc aagatcaatg gcggtgaaga cggacgctcg atgtgataca atgagcggtg
98881 gtatgatcgt ccttcaacac acccatacag tgaccctgct aaccatagac tgttctactg
98941 acttttcatc atacgcattt acgcaccggg atttccactt acaggacaaa ccccacgcaa
99001 catttgcgat gccgtttatg tcctgggtcg gttctgaccc aacatctcag ctgtacagta
99061 atgtgggggg ggtactatcc gtaataacgg aagatgacct atccatgtgt atctcaattg
99121 ttatatacgg tttacgggta aacagacctg acgatcagac cacaccaaca ccaaccccgc
99181 accagtatac atcgcaaagg cggcagcctg aaaccaactg tccttcttca ccacaaccgg
99241 ccttttcac atcagacgac gacgttcttt cgttaatatt acgggacgcc gcaaacgcgt
99301 aaagacagat tcaagactaa catttatccc aactgattac atttcatacg cgaataaacg
99361 acacaaaaaa tttatattta acggctttta atttgaagac acctatcctc ttaacgttga
99421 tgagccttgc aggttgggtg ccgcgcttca ccggtattat acataaccga tttaccgtgt
99481 ttacggcagt ctgaccattt accagtgtat gtctgtaata cgacgttgtt gtgtcccgac
99541 aaaattaact cgcgtacaaa tttctgatgt tcccccggcg tggcaacgct ggcatttcca
99601 aacacattac gttctcgtac gtccatgacc gctattttca gtattaattg gttggtcggt
99661 caaagtattt tccttatgta aaaggacacg atctaaagcc gtaaactcat acacaaacac
99721 tggtaccaac ggacgcgatt ttccgtccgt tgagcgggtg taatatcggc gaggtcttct
99781 tgcacgaata ctctcgtaca gtaggtttct gacacggggt gcatgggttt tttgacacaa
99841 cacaaacatt tgcaggctct tatgactgga tggattgaat ttatttttag atagggtcac
99901 gtgtttttgt cgtgacacgc ctcgaccaga aaaggctgcg gttttcgtac acgcgaccgt

```
 99961 tatttcacag gcgttcataa ccaagctgcg gcggatggtg tcggttaatt gtctccgccc
100021 aagttcgtca atagatgata ccatgaacaa cgtatcaaat ggtacatagt cgtctttggt
100081 tttctcaata cagcccgcgt gcccaatcgg aaatttttca tttgcatcaa cgctattttc
100141 tgtaaaatcg ttctgaacac tgtgttggct ggctacctgt ttaaaatttg ggatcgaaca
100201 cggtccacga tgcaatcccc aaccccattg aagcaatgcc gtcggtacgg aaggaggcaa
100261 ctccgaaaac attatggtac gcaagagggt cgattggagt gttatataac actccaatcg
100321 atctcgggtt cgcctttacg cgtaaaatac tcattggctt gaacgaaatg tcgacaattc
100381 cgaaatggaa cacgggacaa tggcgacgga tgcgcgtgtg ttagcaccag atgacatctt
100441 gaattcggtt gggttgtctt ctgtgcatgc gcaccccaca gcataaaaac taaccctgta
100501 cggttctcgc ataacctctg tagcacgcgt tgcaccagcc gcccccagcc taagtataca
100561 tgcgaccccg gagtcccgcg acgaaccgta agcgtggtat tcagcaataa caccccctgc
100621 cttgcccaac tctccaggca tccgtgagtg ggcggagtca tatttgggta tgattccatg
100681 agggccgcaa aaatattttt aagactagac ggtggtgtta tgccacgttt tacactaaac
100741 gctagcccat gtgcatgtcc cgcggtaggg tatggatctt gaccaataat tacaacgcga
100801 atgctctggg gtccgcaaaa tcgcgtccat gcaaaaatat cgcctgtaga tggaagtatt
100861 tcttcccctg aatttaaaag acgattgtat tctaaaaaaa tacctttcgc gtacggctct
100921 ttaagttcgt ccgacaacag gtcataccac tcaggggaaa tgttaaactt gctgaaaact
100981 tcaaccgaat ccagttgcga agagacgggg gtgaacgttt ccgtgtcgta atgatgtgac
101041 atgttattta acttgaaggt tgggggggtct agcttaaccc ccaaaggcag cccgcggggt
101101 cgcttgcggg ttttttggt aaccggatgg gccaaaacat aaatgtcctt tgaatccgat
101161 agtttcattt cattggcata cgcgttggaa caaacggtcg gctccccaga cacatccatt
101221 ttccgggata tttgtggaag atggagtaga gtctacccat acaccggaaa gggcatccaa
101281 caaagcatcg cgtatgtccc cgcttttatg ttcttcacca acagattgtg ccagcccctt
101341 taaggtgacg tatggatttg tccagtacgc catttgtttg tctttaaacc aaagtataac
101401 ttccggtact ggacattttg tcttaaccac gattcccgat agcgcctcgc tgaggtttga
101461 taccgggggt gccgcatagt cccacgcctc atataccgat gacacgcacg gttccgttat
101521 aatcaaactc acatccgata gcggtttggc tccaaaaaac aacggagtgt cgtcttggag
101581 atgaagacaa tacgcgattg tgatagtttt taaaaaaact atctgcagta accatttatg
101641 tgatgccatg acgcttgtgt tttcccttca ctacgacgtt gtcgtatcct ttgaaaaact
101701 tgaccactct aatggaagca tggacaagta tgagttttat atatacagtt ggcctttagt
101761 taaactcttg gtgtcatatc tcattttcct aaaaagggcg atcttaatat gtcaaacgtc
101821 acggcgtgcc gacaaagcga atttccatgc aagatttgga tgtagtattt atacacccaa
101881 tcacatgtca cgtattaagc tttacagtcc cccgttatct gatataatca cttttcttaa
101941 cacgtcatcg ggaaaacaga tgtttatatt atacctctcg cggtcattta cggcaaatac
102001 ttagaccgtt ttcaagcgga ctgaaaacgc tcaaattgcc ttttggaggc ctgcccaacg
102061 gccattatcc cttggatcta agattgattt gcggtaacgt ttgccaatca agctttaaaa
102121 acgtacccca aacttaaaac gctcaaattg ccttttggag gcctgcccaa cggccattat
102181 cccttggatc tgagattgat ttacggtaac gtttgccaaa cccacgcatt tcagtttaaa
102241 tatttctaag cattcttagt gcgtacttgg cagcgtgctt aaaatatcaa ccaatatcca
102301 ttatgctaca cgtttccttc tatccgtttc aatccattaa aagtccatta acaaaaatga
102361 tgcatcatac ctaattcacc taaaaacctg actcattgca gcagcgtttc ctccttgcag
102421 actatccagt tggcatttta aacgggtccg gctgcctaaa ccgaaaacac cgttgccttt
102481 actgtaagta caaaactaaa atttatattt gcgtgcgtat tttgtaacat atatgccttt
102541 tatccccccg caagtttgct ttaccctcgc cttcaccacc cccgccacct tccggccatt
```

102601 ttaataactt taattgctat aagacatacc caaaccggat gatttttgcc gctggaaaaa
102661 cagcttctaa ttttcccgtc tcaactcggc cttggttgca tctccaagta tacctttagt
102721 ttgctcccgt agaggtgtat aaatacaaac ggtgacaagt attgagcgta atctcaaatt
102781 tttgtaattt agggcggagc gcttacgaca gcacatgcgt actgttagac tgttatgttt
102841 attgtatttg cagagcagga tgccccggtt actccgagac cggattgcgg gcattccgaa
102901 tcgtgtacgg acttaccagg gggcagtatt tacaccttgg gttccagata taccaaccct
102961 tacgaccaat agcaacactc aggtattttt aaaatgcacg tttaatgatc ataatttaca
103021 tacagttggt aataaagcag actgtggatg tttaaggcat ttccttcccc ctcccaacaa
103081 actaggactt cttcatcttg tttggaatac ctttacccgc tttaccggca gagcttttt
103141 tggtaaggtg tttcagtgaa cctgatgttg atccggaggt ggaggggta ttggactccc
103201 cctgtggaga ggcaactttg cgggttttac ttcccttaca tgccgaatca gactcagatg
103261 tcaggtctat tgttaagcat cgtttaacgt ctctgccggt atgaaataaa cggcgcttag
103321 cacccttgc gcttcccggt ttaatccccg gtaacacaga aaaaagcctg actttttggg
103381 gtgtatttac caatcgggta tccctttcat cgccacgaga ggtctccccg gttgaggtgg
103441 tttctggtct tacaattgga cctgtaatta gttggatggc tgtatctttc caggtccagg
103501 tttgcatggt taggcgggtt ggatcggtac atcgatccaa caagaataac atgtttgtta
103561 caaacggtcc tgttgaatca tgcaaaagac aacgcaggga tgtttttaat cccgcctcat
103621 cacgcccgta aatacctata tagtttaata tcaacatttt tgtaggctct acaatttcgg
103681 gttgatacag ttccgcaagt tgatcatcaa gccatccgag taaaggttgc atgtaacacg
103741 ggaatctcgc gtttccctct gttcctctat ccgtggctcg aaaaggcagt ctgtccatgg
103801 ttcgtgggtc ttgattaatt cccacagata ctggacgatc acggtagtcc tgccccccgg
103861 tccggggttg ctgtgcagat tcaatcgagc catacaccac cggggtcgcc gatcgaacag
103921 caggttggtc tttaaaaaat accttccgta aaaatgatgc ggtagagcat gttttggtta
103981 caccagggct cgagtctcgg gtcggtggtt gtatagaatc ctgttgagag tcacttggtg
104041 actctgctgt gggctctcta gccgacgatt gaaggggccc agggtttggt gattgaatgg
104101 gctcccgact cgatcttgat gttggctgtt ggatggactc ccgactcggt cctgggcttg
104161 gtggcagaag atctatgaca tctcccggta ggatgtcgat ggaatcttca aatgacggct
104221 cagaaaaacc atcgtcgtcg gatgggtgca cttcatattc cttgtaactt gtatcactta
104281 cgatcttatg caggatggat tgcactggac accggcagag aggacactgg acgctggtgg
104341 aggtccatgc ccgaatacaa acaaagcaga agtcgtgcaa acacggcatg gtttttccga
104401 gatcggaaac ggtgctcatg catatggtgc aggtattatc cgaagcgtcg gaggtgccgc
104461 taccgcccgc taatatggta tccatggtaa caactggctg tattctaatg tccgggcatc
104521 caaacacgta gcagaactgc catgcgttct aaattgtgag ttgtggcgag tacattttta
104581 taattggtac caacgaagac acacccctat atccctccac ccatttcttt taagtcccac
104641 ccactaaaac gtgggtataa aatgtgtatt ggggtaggcg gacagtccca acaaacaggg
104701 aagttgattg gtataacctt gggccgggta tacagctaag tgacatttta gattctgtct
104761 ttatttagat aaagagcgat acgaagacat ttctccaccc ccctgtaata cccgtaaata
104821 aaggtaagtc cacaaacaaa agcactgtat ataggaagtc gggtgtattg ggacagttac
104881 tccattagag gcgtacaaac aatactggga tagggtaatg caagtccccc ccgatggtcg
104941 ccccgcaaac gcgcggggag gtggggtcgc ttttttttt ctctctcgag ggggccgcga
105001 gagggctggc ctcctctccc ggggtccgcc gggcgcccag aaaccggggg ggggttattt
105061 tcgggggggg gtccgaccag cccgcccgtc gcccgcccgc acagacagac agacactttt
105121 ttcataaaaa ccgttccgct tttattaaca acaaacagtc cgcgcgccag tggcgctcac
105181 gagaaaagga ggggactccg tcacccccga ctctgcgggg ggctcctccc cccgcgccct

105241 ccccacacat cgtcctcgtc ctcggaggac gaggacgagg acaacagctc caccttgacc
105301 gccgggcgca aacccacccg gcggtctcgc agcacacccg gggccaccga cacgatgctc
105361 accccaaagg atgaccccgg tgcgtccccg tcgtccccgc ccccctcctc gctgtcccac
105421 gcgtcttcac accccacctc ccaatcgtcc agctccaaag cgtgttctct gtcgtctgcg
105481 gtgcgccgct gtcgccccgc ctgggtttct gacggccgtt ccgagccccc gtggtgtccg
105541 aacacgaacc gtgttccgtc gctcccctcc aacaccgtct ccgcggcccc aaaaccgggc
105601 ggccacatta ctctgggaat cgggggggagg gcattccgag cctcgtccgc cgacgcatac
105661 agcgccaccg accgaccggc cacgggtgga agcacgagtg gttctgcggc agggtcgggt
105721 tccagcaggg cgtggcggca aaacaccctc gcccaggtgg gtacgtcgcc ggcctccggc
105781 ccggcggccc ccggtctccg tccctcggga aggaagacgg gtcgaagcgc ggcacccagg
105841 ccccatcggt ttgctgcgcg gtggctatgt gccgcctcgt ccacaaagtc ggctgccccg
105901 agccccagac cccgagactg tcgcgcgagg tccttgcaac cgtcaaaacc cggcagcacg
105961 tactgccggt attcacgggg cgacaggggg acgcgggtct tggggcccgc gcgggtacac
106021 acggtgtatg cgacgttccc accgcggcac aaacacaggg gttgttcgcc cgggtacagg
106081 ttggcaaacg cagtctcgat acgagcaaaa ctcgctggcc caaaggtgcg cgacgatgca
106141 aacacggccc gggcgagtcc ttctgtgacc gccgagtctg gccatcggac gacggcctgg
106201 gcgtccggtc gcgccggggc ccggacgtac acgtgatact gagacaaagc gggtccatcc
106261 ctgggccacc tctcgagggc caccgcgtcc aacaccagca accggcgccg ggcagaggcc
106321 aaccgcgagc ctagatactc gacggccccg gcaaaggcca ggtctcgggt cgacagtaat
106381 aaaacgcccc gggcgttcaa agcggacacg tccggcgggc cggtccagtt cccggcccag
106441 gcatgagtgc tcggcaggca caaccggtta ctcagggctg ccaggaccac agacagtccc
106501 cctcgggatg gactccatga cggtcccgga tctgtcgcga gggtgctctc gaggggggccg
106561 ttgatgtcct ctccgggcaa cggatcgtag atgatcagaa gcctcacatc ctccgggtct
106621 gggatctgcc gcatccaggc gcacctccgt cgcagcgcct ccactccgct gggtggacca
106681 aaccgtcggt ctcctccgcc cggacgccga gcggcgattt ccgccaaggc gccgggatca
106741 aagcttagcg cagggcgcca ggccgtggga aacaatgggt cgtcgaccag acgggcgatg
106801 gtttcggggg tacagtacgc cttgcgagcc tggtccgacg ggaccggggt atgcagggcc
106861 ccccggggaa tacgccgaaa tcccccgttt ggggccggtc cgtcaagtgg catcgttatt
106921 acggcggggg gatccaccac agggcccgag gtgatggtca cgggctcgga tacccgcctc
106981 ttggccttgg aaaccacatg atcgtctgca acccgggcgt ccgcgacggg tgtctcccta
107041 atcttgtcga ggaggcttct gctctcgact ggctgggact tgcgcttgcg cggagttcgt
107101 aaacgatcat ccggtggaca cacagaaaga gagcgtgcgg cggccgacgg ctgagggtcg
107161 ggagcctgtg tggccggggt tgttggagaa gggtgaccgc gggagatccg cgccgccgga
107221 ctggagcccg ttgcctcggg gtatgccatg ctggcaaagg ctctgcggag actctgtagg
107281 ataaagtgtt tttgggcccg gtcgtatcga cggctcatag ccacggccgc ggccgcgtgg
107341 gggagagccc agagggcctc ccccgtggcc atggcttcgc ctacatgcgg aacgggagac
107401 gctacgctcc ccgtaacggc ggtacccgcc cgtcccggtg gcaacagctt ttggtagaac
107461 tggttcaggg ccgagttgac accggtcagc ttggggttct ggagccatgc tatagggtct
107521 ctgtctggac agtagatcag gttaatcagc gcgcggtact gtctagccgg atctcccaac
107581 tccggcacgt aaagcggcac gggttccgtt gaggcctcgt aacgagcccg cgccgctctc
107641 acagcctcat cctcccagtg accctctctg gtctccccgg acggtccaaa ccgcaccctg
107701 ttggatggga ggggtgccga tccgggccaa gggcttccgt cgggcatcat gagcggcccc
107761 gacaccgggg gaattatcgg ggttctggat cgcggcaggg aaaatgattt ctgtctctgg
107821 cgccccggtt cccccgcaag acgtttggtc ttacgaatcc tcggatcggg accgctgatg

107881 gatcgatatc ccggttggat attttgtttc gtcgacccac catcatttga gtccgaatca
107941 tccgaatttg acggggaagg ggcgtgttcg cgtccggacc tgctgcctgt agtttcactt
108001 cccaccgaaa cgcgccgggg ttcatcgtct tcatcctccg atgacgatcc ccacgacgag
108061 gaagaggatg aagacgaaac aaactcacga ctctttggct ttttctccac tgggctgtca
108121 tcctcaatcg ggtctggtgc gtgggatctt cccggcaggg ccaaaaacgc tctaggtttg
108181 ccccccgacg aacgtccagg gacgcgaggt gttatacccc gggcatcatg tttccttggg
108241 cgggtatcat cggtctcaaa cggcaggtcc gcctttgccc ccttagcggg aacgctgtcc
108301 gaaaggacgt ggtacaattg ctcaaccggg ccgggtacag gtccaccggg tttccgcgcc
108361 gggagtggga ccttaacctt caaagtcttt ttcttcgggc tctttccctg agcgggccgt
108421 tgagttttct ggagaactac tccgtccccc gatgcatgcg catgacccgc ttgctcatcg
108481 cccggctttt tacccgagat ggactgagtt tgtctgtctc gatggaccac cgacggcaaa
108541 cctggtgaat ttcctctcgt cgtttgtcgg ggtatagacc gctggtcttc ccgttgatcg
108601 ttcccggcgg cgtctccaac aggagacgcg ggggatacag gggagaaggc ctgcgggaac
108661 ggaggggtcg tacctctgcc cgtttcccca tcgttcatcg gtggttttgg agacctagca
108721 agcttcgttc cgagagagac tgtctcaagg gagcgatcgg ctcctgttgg ttctcgcgcg
108781 ccggcctccg agaatcgggt gtggaagacc tcggccagcg ggattacagg cgagcccatt
108841 agatcctgac cgtcctcgca tacgtagtcg tcttgtgtta gctcttcgcc aacatcttcc
108901 gttctgggtt ctggttgaag tcccgatacg gagggaattg aaacgatctc gtgttcccgt
108961 cccaccatga ccccgttctc tccaaatagt agatcgtcag gctgactcga ggtgaccacc
109021 cgggccctgt gttcggcggc cgccgcggcc gcgtccaaca ggtccattaa ctccaaagta
109081 tcaggcgacc ccgcgcgttg gggtgtagag cgctgcatcg gcggcgtatc catcgcactg
109141 gggtgaattt agacgtaccc gagttttcca aacgctctcg cagccttcaa aggattgcga
109201 ttgcggttgg tgagggagtt ccaacagtac ttaaaacgtg ttgtgccccc ccctcgaccg
109261 catatttcct ccccgtgtcg tcaccgtgta aatattctta atgataagac gatgtagtga
109321 ttggacgaga ctcgaggcgg gaagttcatg gaccatagta tgcgtttaag gagagaccgc
109381 tggttggcga tgtacgcccg gtgtctattt ccgcatacct tacaacatca taacaaggga
109441 taccagacat gtgaatttca tttacatatg tttaaataac aaccaatcat cgtgtgtcta
109501 cagacgatat ataatataca taaacacaat tggggttgtc tcacatgcaa aacatcttat
109561 ataacacggg ttgtttccac ccatccggca tctagttaat caaatgcacg tcgacggtgt
109621 gtttgggtcc ctctccgtcg tcattacgtt cgcgcaatca acaagcgtat acaccaccac
109681 ccctcccaac gattatgtca ggcggcacga agcccgcgat aacccataaa atacacacgg
109741 ggttgtggtg ttcacgtaac cccccgccga tggggagggg gcgcggtacc ccgccgatgg
109801 ggaggggggcg cggtaccccg ccgatgggga gggggcgcgg taccccgccg atggggaggg
109861 ggcgcggtac cccgccgatg gggaggggggc gcggtacccc gccgatgttt ataaccataa
109921 ttctctaaac cgttgtagaa aatcacaaaa aaatttattc aaaaacaagt cgaagaactt
109981 catatctgag gcatgtaaac ccgttcgcac ttcctggggt ggaatggggt ggggtggggg
110041 ggtgaaaaag gggggggggtt aaattgggcg tccgcatgtc tgtggtgtac gccaatcgga
110101 tacactcttt tgatctgcat tcgcacttcc cgtttttttca ctgtatgggt tttcatgttt
110161 tggcatgtgt ccaaccaccg ttcgcacttt ctttctatat atatatatat atatatatat
110221 atatatagag aaagagagag agtttcttgt tcgcgcgtgt tcccgcgatg tcgcggtttt
110281 atggggtgtg ggcgggcttt tcacagaata tatatattcc aaatggagcg gcaggctttt
110341 taaaatcgat ttgacgtgat aaaaaaaaac acacggggcc ccccccttttt tttggtgtta
110401 taaaggcaac ccaatcgaag gtctcccgcc ccggaatccc ccattgccat tttacccaag
110461 tagccttatt catagatgta aacgtttggg tgtgtgtttt gttgtgcagg gttcgtccga

110521 ttcataacgc gacagcgtcg agtcggtttt aagggaaaag gttactacgg ccccaaggac
110581 atgttttgca cctcaccggc tacgcggggc gactcgtccg agtcaaaacc cggggcatcg
110641 gttgatgtta acggaaagat ggaatatgga tctgcaccag gacccctgaa cggccgggat
110701 acgtcgcggg gccccggcgc gttttgtact ccgggttggg agatccaccc ggccaggctc
110761 gttgaggaca tcaaccgtgt ttttttatgt attgcacagt cgtcgggacg cgtcacgcga
110821 gattcacgaa gattgcggcg catatgcctc gacttttatc taatgggtcg caccagacag
110881 cgtcccacgt tagcgtgctg ggaggaattg ttacagcttc aacccaccca gacgcagtgc
110941 ttacgcgcta ctttaatgga agtgtcccat cgacccccctc ggggggaaga cgggttcatt
111001 gaggcgccga atgttccttt gcataggagc gcactggaat gtgacgtatc tgatgatggt
111061 ggtgaagacg atagcgacga tgatgggtct acgccatcgg atgtaattga atttcgggat
111121 tccgacgcgg aatcatcgga cggggaagac tttatagtgg aagaagaatc agaggagagc
111181 accgattctt gtgaaccaga cggggtaccc ggcgattgtt atcgagacgg ggatgggtgc
111241 aacaccccgt ccccaaagag accccagcgt gccatcgagc gatacgcggg tgcagaaacc
111301 gcggaatata cagccgcgaa agcgctcacc gcgttgggcg agggggggtgt agattggaag
111361 cgacgtcgac acgaagcccc gcgccggcat gatataccgc ccccccatgg cgtgtagtct
111421 ttataaataa atacaatggt ttggctcgtg tctttttttg atgtctgtct gtgggggagt
111481 ggggtgttgt ggatattaga gggtagaggg tgctggtttg aacgtctcca ttaacccacg
111541 gggtccccac acgggccgtg tggtatgaat ctctgcggat cccgcggtga gcacccgggc
111601 ggtgaatatg ccggacttta ctgcacacga cacgataccc ccgcgcacca ggctctcatg
111661 aacgacgccg aacggtactt cgccgccgcg ctatgcgcca tatctaccga ggcctacgag
111721 gcttttatac acagcccctc cgagagaccg tgcgcgagtt tgtgggggag ggcaaaggac
111781 gccttcggac ggatgtgcgg ggagctcgca gcggatagac aacgtccacc ctcggttccg
111841 ccgatccgca gagcggtgtt atcgttatta cgcgagcaat gcatgccgga tccacaatcg
111901 catctggagc tcagcgagcg gctgatattg atggcatatt ggtgctgttt gggacacgcc
111961 ggacttccga ctattggatt gtcgcccgat aataaatgca tccgcgccga attatatgac
112021 cgcccccgggg gaatttgtca caggcttttt gacgcgtacc tgggctgcgg gtcccttgga
112081 gtcccaagaa cctacgagag atcctgacac cccatccctt tatatagaaa aaaaaaataa
112141 atttaaaaca tacaccggat aaaagcgtac tgtttttttat ttaaatttac acgctcggcg
112201 ttgccccggt tcggtgatca ccgggtctta tctatataca ccgtgtaact cgaacccccg
112261 tgactccctc caatcgcgtt accaaactct tcttccgtat ccgtagattc cgagtcctcg
112321 aaatcgtcca cttatccaac aaattgtgac gttatatatc ccaaggcaaa ggccgctccc
112381 gtcatagcaa atacaaagac aattattagc gtaatataac agaatttttt acgatgatat
112441 attttatgtt gatattttcc aattcgacgc aaaaattcat ctgccgtttc attttcgcta
112501 tcactataat aacacttttc agccgaacgg ctcggttgta tggctgttat cgttgtatta
112561 tttggttgcg ctcgcggggt taccaccgct tccatcagta aggccacggc ctcaccctcc
112621 atggtgtttt gtccggccat agaaatccag attgtaaggc cagcaggcta gtttaaaagt
112681 gtttaatacc acacctttg atatttatat acatgcaaga ttctagatta ttcatcaata
112741 ggtcgtttaa agcgcgtttt cataaacgtt gtcagctata ccgacattct cacaaagagg
112801 taaagttacc ttacgttatt attaaataaa acatgtagac attattaata atcctaggaa
112861 caatcaaatc catatttgta agttatgttt aacccctccc ctttttgtca ttatctccgc
112921 cctcttataa tcggatcact ttataagtgt gtcggtgagt atattttgta cagttgttgg
112981 acaacaggtt tttggttcat taacactatc aacataagtc ggggtataca agtataatga
113041 acgacgttga tgcaacagac acctttgttg gacaaggaaa gttccgtggc gccatctcaa
113101 catcaccgtc acatattatg caaacatgtg ggtttataca acagatgttt ccagttgaaa

113161 tgtcgcccgg catagaatct gaggatgatc ccaattatga cgttaacatg gatatacagt
113221 cttttaatat atttgatggt gtacacgaaa ctgaagccga agcctctgtg gcattgtgcg
113281 cagaagcacg cgttggaatt aataaagcgg gatttgtaat attaaaaacg tttacaccag
113341 gggcggaagg ttttgcgttt gcgtgtatgg acagtaaaac atgtgaacat gtggtcatta
113401 aagcgggtca acgtcaagga acggccaccg aggcaaccgt gttaagagcg ttaacccacc
113461 catccgttgt acagcttaaa ggaacgttta cgtataacaa aatgacatgt cttatattac
113521 cacgttaccg aacagattta tactgctatc tagctgcaaa gcgcaacctc cccatatgtg
113581 acattttagc aattcagcga tctgtattac gcgcgttaca gtatcttcat aataacagta
113641 ttattcaccg tgatataaaa tctgaaaata tatttattaa ccacccaggt gatgtttgtg
113701 tgggagactt tggagcagcg tgtttccccg tggatattaa tgccaacagg tattatggct
113761 gggctggaac aatcgccaca aactctcctg agttattggc tagagatcca tatggacctg
113821 ccgtggacat atggagtgcc gggattgtat tatttgaaat ggctacagga cagaactcgt
113881 tatttgaacg agacggttta gatggcaatt gtgacagtga gcgtcaaatt aaacttatta
113941 tacgacgatc tggaactcat cccaatgaat ttcccattaa ccctacatca aatcttcgtc
114001 gacaatacat tggtttggca aaacggtctt ctcgaaaacc cggatccagg ccattgtgga
114061 caaatctata tgagttgcca attgatttgg agtatttgat atgtaagatg ttatcgtttg
114121 acgcacgtca tcgaccatca gcagaggtgt tgcttaacca ctctgttttc caaactcttc
114181 ccgatccata tccaaatcca atggaagttg gagattaaaa ttcattaagc ctgttaataa
114241 aatattgtat aaattgtgtt tataacgtat aacccgttaa ggcaaatagg gtacaaacgc
114301 gcaatgtttt gaaatactaa tataaataac ataaccaata gaaacttaat acagagtcac
114361 gccccattac aacaaggata aaacacggga tcattttctt aacattgtag tagcgctgaa
114421 aagcgtcccc tcccccggct cacagagctg ctcttcggtg tagttgggta tactggtgcg
114481 cctcatttaa tcgcgatgtt tttaatccaa tgtttgatat cggccgttat attttacata
114541 caagtgacca acgctttgat cttcaagggc gaccacgtga gcttgcaagt taacagcagt
114601 ctcacgtcta tccttattcc catgcaaaat gataattata cagagataaa aggacagctt
114661 gtctttattg gagagcaact acctaccggg acaaactata gcggaacact ggaactgtta
114721 tacgcggata cggtggcgtt ttgtttccgg tcagtacaag taataagata cgacggatgt
114781 ccccggatta gaacgagcgc ttttatttcg tgtaggtaca aacattcgtg gcattatggt
114841 aactcaacgg atcggatatc aacagagccg gatgctggtg taatgttgaa aattaccaaa
114901 ccgggaataa atgatgctgg tgtgtatgta cttcttgttc ggttagacca tagcagatcc
114961 accgatggtt tcattcttgg tgtaaatgta tatacagcgg gctcgcatca caacattcac
115021 ggggttatct acacttctcc gtctctacag aatggatatt ctacaagagc ccttttttcaa
115081 caagctcgtt tgtgtgattt acccgcgaca cccaaagggt ccggtacctc cctgtttcaa
115141 catatgcttg atcttcgtgc cggtaaatcg ttagaggata acccttggtt acatgaggac
115201 gttgttacga cagaaactaa gtccgttgtt aaggagggga tagaaaatca cgtatatcca
115261 acggatatgt ccacgttacc cgaaaagtcc cttaatgatc ctccagaaaa tctacttata
115321 attattccta tagtagcgtc tgtcatgatc ctcaccgcca tggttattgt tattgtaata
115381 agcgttaagc gacgtagaat taaaaaacat ccaatttatc gcccaaatac aaaaacaaga
115441 aggggcatac aaaatgcgac accagaatcc gatgtgatgt tggaggccgc cattgcacaa
115501 ctagcaacga ttcgcgaaga atccccccca cattccgttg taaacccgtt tgttaaatag
115561 aactaattat cccggatttt atattaaata aactatatgc gttttattta gcgttttgat
115621 tacgcgttgt gatatgaggg gaaggattaa gaatctccta actataagtt aacacgccca
115681 catttgggcg gggatgtttt atgaagcctt aaaggccgag ctggtataca cgagagcagt
115741 ccatggtttt agacctcggg cgaattgcgt ggttttaagt gactatattc cgagggtcgc

115801 ctgtaatatg gggacagtta ataaacctgt ggtgggggta ttgatggggt tcggaattat
115861 cacgggaacg ttgcgtataa cgaatccggt cagagcatcc gtcttgcgat acgatgattt
115921 tcacaccgat gaagacaaac tggatacaaa ctccgtatat gagccttact accattcaga
115981 tcatgcggag tcttcatggg taaatcgggg agagtcttcg cgaaaagcgt acgatcataa
116041 ctcaccttat atatggccac gtaatgatta tgatggattt ttagagaacg cacacgaaca
116101 ccatggggtg tataatcagg gccgtggtat cgatagcggg gaacggttaa tgcaacccac
116161 acaaatgtct gcacaggagg atcttgggga cgatacgggc atccacgtta tccctacgtt
116221 aaacggcgat gacagacata aaattgtaaa tgtggaccaa cgtcaatacg gtgacgtgtt
116281 taaaggagat cttaatccaa aaccccaagg ccaaagactc attgaggtgt cagtggaaga
116341 aaatcacccg tttactttac gcgcaccgat tcagcggatt tatggagtcc ggtacaccga
116401 gacttggagc tttttgccgt cattaacctg tacgggagac gcagcgcccg ccatccagca
116461 tatatgttta aaacatacaa catgctttca agacgtggtg gtggatgtgg attgcgcgga
116521 aaatactaaa gaggatcagt tggccgaaat cagttaccgt tttcaaggta agaaggaagc
116581 ggaccaaccg tggattgttg taaacacgag cacactgttt gatgaactcg aattagaccc
116641 ccccgagatt gaaccgggtg tcttgaaagt acttcggaca gaaaaacaat acttgggtgt
116701 gtacatttgg aacatgcgcg gctccgatgg tacgtctacc tacgccacgt ttttggtcac
116761 ctggaaaggg gatgaaaaaa caagaaaccc tacgcccgca gtaactcctc aaccaagagg
116821 ggctgagttt catatgtgga attaccactc gcatgtattt tcagttggtg atacgtttag
116881 cttggcaatg catcttcagt ataagataca tgaagcgcca tttgatttgc tgttagagtg
116941 gttgtatgtc cccatcgatc ctacatgtca accaatgcgg ttatattcta cgtgtttgta
117001 tcatcccaac gcaccccaat gcctctctca tatgaattcc ggttgtacat ttacctcgcc
117061 acatttagcc cagcgtgttg caagcacagt gtatcaaaat tgtgaacatg cagataacta
117121 caccgcatat tgtctgggaa tatctcatat ggagcctagc tttggtctaa tcttacacga
117181 cgggggcacc acgttaaagt ttgtagatac acccgagagt ttgtcgggat tatacgtttt
117241 tgtggtgtat tttaacgggc atgttgaagc cgtagcatac actgttgtat ccacagtaga
117301 tcattttgta aacgcaattg aagagcgtgg atttccgcca acggccggtc agccaccggc
117361 gactactaaa cccaaggaaa ttacccccgt aaaccccgga acgtcaccac ttctacgata
117421 tgccgcatgg accggagggc ttgcagcagt agtactttta tgtctcgtaa tatttttaat
117481 ctgtacggct aaacgaatga gggttaaagc ctatagggta gacaagtccc cgtataacca
117541 aagcatgtat tacgctggcc ttccagtgga cgatttcgag gactcggaat ctacggatac
117601 ggaagaagag tttggtaacg cgattggagg gagtcacggg ggttcgagtt acacggtgta
117661 tatagataag acccggtgat caccgaaccg gggcaacgcc gagcgtgtaa atttaaataa
117721 aaaacagtac gcttttatcc ggtgtatgtt ttaaatttat ttttttttc tatataaagg
117781 gatggggtgt caggatctct cgtaggttct tgggactcca agggacccgc agcccaggta
117841 cgcgtcaaaa agcctgtgac aaattccccc ggggcggtca tataattcgg cgcggatgca
117901 tttattatcg ggcgacaatc caatagtcgg aagtccggcg tgtcccaaac agcaccaata
117961 tgccatcaat atcagccgct cgctgagctc cagatgcgat tgtggatccg gcatgcattg
118021 ctcgcgtaat aacgataaca ccgctctgcg gatcggcgga accgagggtg gacgttgtct
118081 atccgctgcg agctccccgc acatccgtcc gaaggcgtcc tttgccctcc cccacaaact
118141 cgcgcacggt ctctcggagg ggctgtgtat aaaagcctcg taggcctcgg tagatatggc
118201 gcatagcgcg gcggcgaagt accgttcggc gtcgttcatg agagcctggt gcgcgggggt
118261 atcgtgtcgt gtgcagtaaa gtccggcata ttcaccgccc gggtgctcac cgcgggatcc
118321 gcagagattc ataccacacg gcccgtgtgg ggaccccgtg ggttaatgga gacgttcaaa
118381 ccagcaccct ctaccctcta atatccacaa caccccactc ccccacagac agacatcaaa

118441 aaaagacacg agccaaacca ttgtatttat ttataaagac tacacgccat ggggggggcgg
118501 tatatcatgc cggcgcgggg cttcgtgtcg acgtcgcttc caatctacac ccccctcgcc
118561 caacgcggtg agcgctttcg cggctgtata ttccgcggtt tctgcacccg cgtatcgctc
118621 gatggcacgc tggggtctct ttggggacgg ggtgttgcac ccatccccgt ctcgataaca
118681 atcgccgggt accccgtctg gttcacaaga atcggtgctc tcctctgatt cttcttccac
118741 tataaagtct tccccgtccg atgattccgc gtcggaatcc cgaaattcaa ttacatccga
118801 tggcgtagac ccatcatcgt cgctatcgtc ttcaccacca tcatcagata cgtcacattc
118861 cagtgcgctc ctatgcaaag gaacattcgg cgcctcaatg aacccgtctt ccccccgagg
118921 gggtcgatgg gacacttcca ttaaagtagc gcgtaagcac tgcgtctggg tgggttgaag
118981 ctgtaacaat tcctcccagc acgctaacgt gggacgctgt ctggtgcgac ccattagata
119041 aaagtcgagg catatgcgcc gcaatcttcg tgaatctcgc gtgacgcgtc ccgacgactg
119101 tgcaatacat aaaaaaacac ggttgatgtc ctcaacgagc ctggccgggt ggatctccca
119161 acccggagta caaaacgcgc cggggccccg cgacgtatcc cggccgttca ggggtcctgg
119221 tgcagatcca tattccatct ttccgttaac atcaaccgat gccccgggtt ttgactcgga
119281 cgagtcgccc cgcgtagccg gtgaggtgca aaacatgtcc ttggggccgt agtaaccttt
119341 tcccttaaaa ccgactcgac gctgtcgcgt tatgaatcgg acgaaccctg cacaacaaaa
119401 cacacaccca aacgtttaca tctatgaata aggctacttg ggtaaaatgg caatgggggа
119461 ttccggggcg ggagaccttc gattgggttg cctttataac accaaaaaaa ggggggggcc
119521 ccgtgtgttt ttttttatca cgtcaaatcg attttaaaaa gcctgccgct ccatttggaa
119581 tatatatatt ctgtgaaaag cccgcccaca ccccataaaa ccgcgacatc gcgggaacac
119641 gcgcgaacaa gaaactctct ctctttctct atatatatat atatatatat atatatatat
119701 agaaagaaag tgcgaacggt ggttggacac atgccaaaac atgaaaaccc atacagtgaa
119761 aaaacgggaa gtgcgaatgc agatcaaaag agtgtatccg attggcgtac accacagaca
119821 tgcggacgcc caatttaacc cccccccttt ttcacccccc caccccaccc cattccaccc
119881 caggaagtgc gaacgggttt acatgcctca gatatgaagt tcttcgactt gtttttgaat
119941 aaatttttтt gtgattttct acaacggttt agagaattat ggttataaac atcggcgggg
120001 taccgcgccc cctccccatc ggcggggtac cgcgcccccc ccccatcggc ggggtaccgc
120061 gcccccctccc catcggcggg gtaccgcgcc ccctccccat cggcggggta ccgcgccccc
120121 tccccatcgg cgggggggtta cgtgaacacc acaaccccgt gtgtatttta tgggttatcg
120181 cgggcttcgt gccgcctgac ataatcgttg ggaggggtgg tggtgtatac gcttgttgat
120241 tgcgcgaacg taatgacgac ggagagggac ccaaacacac cgtcgacgtg catttgatta
120301 actagatgcc ggatgggtgg aaacaacccg tgttatataa gatgttttgc atgtgagaca
120361 accccaattg tgtttatgta tattatatat cgtctgtaga cacacgatga ttggttgtta
120421 tttaaacata tgtaaatgaa attcacatgt ctggtatccc ttgttatgat gttgtaaggt
120481 atgcggaaat agacaccggg cgtacatcgc caaccagcgg tctctcctta aacgcatact
120541 atggtccatg aacttcccgc ctcgagtctc gtccaatcac tacatcgtct tatcattaag
120601 aatatttaca cggtgacgac acggggagga aatatgcggt cgaggggggg gcacaacacg
120661 ttttaagtac tgttggaact ccctcaccaa ccgcaatcgc aatcctttga aggctgcgag
120721 agcgtttgga aaactcgggt acgtctaaat tcaccccagt gcgatggata cgccgccgat
120781 gcagcgctct acaccccaac gcgcggggtc gcctgatact ttggagttaa tggacctgtt
120841 ggacgcggcc gcggcggccg ccgaacacag ggcccgggtg gtcacctcga gtcagcctga
120901 cgatctacta tttggagaga acggggtcat ggtgggacgg gaacacgaga tcgtttcaat
120961 tccctccgta tcgggacttc aaccagaacc cagaacggaa gatgttggcg aagagctaac
121021 acaagacgac tacgtatgcg aggacggtca ggatctaatg ggctcgcctg taatcccgct

121081 ggccgaggtc ttccacaccc gattctcgga ggccggcgcg cgagaaccaa caggagccga
121141 tcgctccctt gagacagtct ctctcggaac gaagcttgct aggtctccaa aaccaccgat
121201 gaacgatggg gaaacgggca gaggtacgac ccctccgttc ccgcaggcct tctcccctgt
121261 atcccccgcg tctcctgttg gagacgccgc cgggaacgat caacgggaag accagcggtc
121321 tataccccga caaacgacga gaggaaattc accaggtttg ccgtcggtgg tccatcgaga
121381 cagacaaact cagtccatct cgggtaaaaa gccgggcgat gagcaagcgg gtcatgcgca
121441 tgcatcgggg gacggagtag ttctccagaa aactcaacgg cccgctcagg gaaagagccc
121501 gaagaaaaag actttgaagg ttaaggtccc actcccggcg cggaaacccg gtggacctgt
121561 acccggcccg gttgagcaat tgtaccacgt cctttcggac agcgttcccg ctaagggggc
121621 aaaggcggac ctgccgtttg agaccgatga tacccgccca aggaaacatg atgcccgggg
121681 tataacacct cgcgtccctg gacgttcgtc ggggggcaaa cctagagcgt ttttggccct
121741 gccgggaaga tcccacgcac cagacccgat tgaggatgac agcccagtgg agaaaaagcc
121801 aaagagtcgt gagtttgttt cgtcttcatc ctcttcctcg tcgtggggat cgtcatcgga
121861 ggatgaagac gatgaacccc ggcgcgtttc ggtgggaagt gaaactacag gcagcaggtc
121921 cggacgcgaa cacgcccctt ccccgtcaaa ttcggatgat tcggactcaa atgatggtgg
121981 gtcgacgaaa caaaatatcc aaccgggata tcgatccatc agcggtcccg atccgaggat
122041 tcgtaagacc aaacgtcttg cgggggaacc ggggcgccag agacagaaat cattttccct
122101 gccgcgatcc agaaccccga taattccccc ggtgtcgggg ccgctcatga tgcccgacgg
122161 aagcccttgg cccggatcgg caccctccc atccaacagg gtgcggtttg gaccgtccgg
122221 ggagaccaga gagggtcact gggaggatga ggctgtgaga gcggcgcggg ctcgttacga
122281 ggcctcaacg gaacccgtgc cgctttacgt gccggagttg ggagatccgg ctagacagta
122341 ccgcgcgctg attaacctga tctactgtcc agacagagac cctatagcat ggctccagaa
122401 ccccaagctg accggtgtca actcggccct gaaccagttc taccaaaagc tgttgccacc
122461 gggacgggcg ggtaccgccg ttacggggag cgtagcgtct cccgttccgc atgtaggcga
122521 agccatggcc acgggggagg ccctctgggc tctcccccac gcggccgcgg ccgtggctat
122581 gagccgtcga tacgaccggg cccaaaaaca ctttatccta cagagtctcc gcagagcctt
122641 tgccagcatg gcataccccg aggcaacggg ctccagtccg gcggcgcgga tctcccgcgg
122701 tcacccttct ccaacaaccc cggccacaca ggctcccgac cctcagccgt cggccgccgc
122761 acgctctctt tctgtgtgtc caccggatga tcgtttacga actccgcgca agcgcaagtc
122821 ccagccagtc gagagcagaa gcctcctcga caagattagg gagacacccg tcgcggacgc
122881 ccgggttgca gacgatcatg tggtttccaa ggccaagagg cgggtatccg agcccgtgac
122941 catcacctcg ggccctgtgg tggatccccc cgccgtaata acgatgccac ttgacggacc
123001 ggccccaaac gggggatttc ggcgtattcc ccgggggggcc ctgcataccc cggtcccgtc
123061 ggaccaggct cgcaaggcgt actgtacccc cgaaaccatc gcccgtctgg tcgacgaccc
123121 attgtttccc acggcctggc gccctgcgct aagctttgat cccggcgcct tggcggaaat
123181 cgccgctcgg cgtccgggcg gaggagaccg acggtttggt ccacccagcg gagtggaggc
123241 gctgcgacgg aggtgcgcct ggatgcggca gatcccagac ccggaggatg tgaggcttct
123301 gatcatctac gatccgttgc ccggagagga catcaacggc cccctcgaga gcaccctcgc
123361 gacagatccg ggaccgtcat ggagtccatc ccgaggggga ctgtctgtgg tcctggcagc
123421 cctgagtaac cggttgtgcc tgccgagcac tcatgcctgg gccgggaact ggaccggccc
123481 gccggacgtg tccgctttga acgcccgggg cgttttatta ctgtcgaccc gagacctggc
123541 ctttgccggg gccgtcgagt atctaggctc gcggttggcc tctgcccggc gccggttgct
123601 ggtgttggac gcggtggccc tcgagaggtg gcccagggat ggacccgctt tgtctcagta
123661 tcacgtgtac gtccgggccc cggcgcgacc ggacgcccag gccgtcgtcc gatggccaga

123721 ctcggcggtc acagaaggac tcgcccgggc cgtgtttgca tcgtcgcgca cctttgggcc
123781 agcgagtttt gctcgtatcg agactgcgtt tgccaacctg tacccgggcg aacaacccct
123841 gtgtttgtgc cgcggtggga acgtcgcata caccgtgtgt acccgcgcgg gccccaagac
123901 ccgcgtcccc ctgtcgcccc gtgaataccg gcagtacgtg ctgccgggtt ttgacggttg
123961 caaggacctc gcgcgacagt ctcggggtct ggggctcggg gcagccgact ttgtggacga
124021 ggcggcacat agccaccgcg cagcaaaccg atggggcctg ggtgccgcgc ttcgacccgt
124081 cttccttccc gagggacgga gaccgggggc cgccgggccg gaggccggcg acgtacccac
124141 ctgggcgagg gtgttttgcc gccacgccct gctggaaccc gaccctgccg cagaaccact
124201 cgtgcttcca cccgtggccg gtcggtcggt ggcgctgtat gcgtcggcgg acgaggctcg
124261 gaatgccctc cccccgattc ccagagtaat gtggccgccc ggttttgggg ccgcggagac
124321 ggtgttggag gggagcgacg gaacacggtt cgtgttcgga caccacgggg gctcggaacg
124381 gccgtcagaa acccaggcgg ggcgacagcg gcgcaccgca gacgacagag aacacgcttt
124441 ggagctggac gattgggagg tggggtgtga agacgcgtgg gacagcgagg agggggggcgg
124501 ggacgacggg gacgcaccgg ggtcatcctt tggggtgagc atcgtgtcgg tggccccggg
124561 tgtgctgcga gaccgccggg tgggtttgcg cccggcggtc aaggtggagc tgttgtcctc
124621 gtcctcgtcc tccgaggacg aggacgatgt gtggggaggg cgcgggggga ggagcccccc
124681 gcagagtcgg gggtgacgga gtcccctcct tttctcgtga gcgccactgg cgcgcggact
124741 gtttgttgtt aataaaagcg gaacggtttt tatgaaaaaa gtgtctgtct gtctgtgcgg
124801 gcgggcgacg ggcgggctgg tcggaccccc ccccgaaaat aacccccccc cggtttctgg
124861 gcgcccggcg gaccccggga gagg