## ÷HCEWNV [ "UGPCVG"GZGEWVKXG"EQO OKVVGG" OGGVKP I "

 $\label{eq:continuous_substitution} We gufc \{."8" Ugrvg o dgt" 4244" \\ Xkc" \setminus qq o ."5 < 52" r \emptyset o \emptyset"$ 

## $\mathbf{C}^{\mathsf{T}}\mathbf{E}^{\mathsf{T}}\mathbf{V}^{\mathsf{T}}\mathbf{K}^{\mathsf{T}}\mathbf{Q}^{\mathsf{T}}\mathbf{P}^{\mathsf{T}}\mathbf{O}^{\mathsf{T}}\mathbf{K}^{\mathsf{T}}\mathbf{P}^{\mathsf{T}}\mathbf{W}^{\mathsf{T}}\mathbf{V}^{\mathsf{T}}\mathbf{G}^{\mathsf{T}}\mathbf{U}^{\mathsf{T}}$

 $\label{lem:condition} \textbf{OGODGTU"RTGUGPV} \ "Dknn" \ Vjqoruqp." \ Ejckt="Ngg" \ Dtkeg." \ Xkeg" \ Ejckt="Lwnkc" \ Cndcttcekp." \ Ugetgvct \ "Ugetgvct \ "Ugetgvct$ 

 $\label{lem:weyler} \textbf{I WGUV} < \text{"Rtgukfgpv" I wk} \\ \{qw" \ J \ wcp \ i = \text{"Xkeg" Rtgukfgpv" hqt" Gptqnn o gpv" Ocpc i g o gpv" C o dgt" Ue j wnv | = \text{"Cf o kuukqpu" Fktgevqt" Fqw i "Htggf"} \\ \text{Fktgevqt" Fqw i "Htggf"}$ 

3+"Rtgukfgpv" J wcpi "vqnf"vjg"Gzgewvkxg"Eq o okvvgg"vjg"ug o guvgt"ku"qhh"vq"c"uvtqpi "uvctv." y kvj "pg y "hcewnv{" qtkgpvcvkqp"cpf"tgegrvkqpu"cnn" i qkpi "tgcm{" y gmd0" J g"ku"uggkpi "c"nqv"qh"pg y "hcegu"cu"vjg"wpkxgtukv{" y gneq o gu"nct i gt" htgu j o gp"cpf"kpvgtpcvkqpcn"encuugu" y jq"ctg"dtkpi kpi "pg y "gpgti {"vq"vjg"ec o rwugu0"Rtgukfgpv" J wcpi "uvcvgf"vjcv" y j kng"qhhkekcn"gptqnn o gpv"pw o dgtu" y knn"pqv"dg"tgngcugf"wpvkn"V j wtufc{."vjg{"ctg"nqqmkpi "xgt{"uvtqpi0" J g"uvcvgf" vjcv"vjg"htgu j o gp"eqjqtv" y knn"dg"vjg"nct i guv"qh"vjg"rcuv"hkxg"{gctu="hqt"vjg"hktuv"vk o g."vjgkt"gptqnn o gpv"t q fc{u"ciq0"Rtgukfgpv" J wcpi "uvcvgf"vjcv"vjku" y knn"dg"vjg"hktuv"vk o g"kp" Y KWøu"jkuvqt{"vjcv"gptqnn o gpv"qh"kpvgtpcvkqpcn"uvwfgpvu"jcu"iqpg"dg{qpf"3.222="vjg"enquguv" y cu"kp"3;:9" y jgp"vjg"wpkxgtukv{"jcf"792."cpf"vjku"{gct"vjcv"pw o dgt"yknn"dg"fqwdngf0"Rtgukfgpv" J wcpi "gzrtguugf"jku"vjcpmu"vq"vjg"Uejqqn"qh" I tcfwcvg"Uvwfkgu."Kpvgtpcvkqpcn"cpf"Wpfgti tcfwcvg"Cf o kuukqpu."vjg"Egpvgt"hqt" I nqdcn"Uvwfkgu."cpf"Gptqnn o gpv"Ocpci g o gpv"hqt"fqkpi "c"hcdwnqwu"lqd0"Rtgukfgpv" J wcpi "uvcvgf"vjcv"vjgtg"ctg"pqy"qxgt"4.522" i tcfwcvg"uvwfgpvu"gptqnngf." y jkej "ku"c"tgeqtf"hqt"cdqwv"vjg"rcuv"36"{gctu0" J g"pqvgf."vjqwij."vjcv"yjkng" Y kW"ku"uggkpi"iqqf"dwnfkpi "hqt"cpqvjgt"fgecfg0" J g"vjkpmu"dwnfkpi "vjg"Egpvgt"hqt"vjg"Rgthqt o kpi "Ctvu." y jkej "ku"rtgfkevgf"vq"vcmg"vyq"vjtgg"{gctu."ykm"ugpf"c"xgt{"rqygthwn"oguucig"vq"vjg"wpkxgtukv{"eqoowpkv{"cpf"vjg"tgikqp"vjcv"Y kW"ku"ujgtvyjc"vjg"wpkxgtukv{"eqoowpkv{"cpf"vjg"tgikqp"vjcv"Y kW"ku"ujgtvyjcv"vjg"vjg"tgikqp"vjcv"yjg"tgikqp"vjcv"yjg"tylmu"vjcv"uvcvg"fkipkvctkgu"cpf"rgtjcru"gxgp" I qxgtpqt"Rtkv|mgt"ykn"

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 $tf"\ y\ j\ gtg"v\ j\ g"Rtgukfgpv."Rtqxquv."cpf"E\ j\ ckt"qh"v\ j\ g"Dqctf"qh"Vtwuvggu"\ y\ km"urgcm"hqt"52/62"\ o\ kpwvgu."hqnnq\ y\ gf" \ d\{"c"Wpkxgtukv\{"Hqwpfcvkqp"\ o\ ggvkp\ i\ 0"Cv"7<22"r0\ o\ 0"qp"Ugrvg\ o\ dgt"45."c"tgegrvkqp"\ y\ km"dg"\ j\ gnf"hqt"v\ j\ qug"cvvgp\ fkp\ i"vjg"ec\ o\ rck\ i\ p"ncwpej\ ."ykvj"c"fkppgt"cv"8<22"r0\ o\ 0"\ y\ j\ gtg"v\ j\ g"hkxg/{gct"ec\ o\ rck\ i\ p"\ y\ knn"dg"hqt\ o\ cnn{"cppqwpeg\ f0"} \ Rtgukfgpv"\ J\ wcp\ i"uvcvgf"v\ j\ cv"v\ j\ g"vct\ i\ gv"hqt"v\ j\ g"ec\ o\ rck\ i\ p"\ y\ knn"dg".dwv"v\ j\ g"c\ o\ qwpv"\ y\ knn"pqv"dg"hkpcnk\ |\ gf"wpkn"v\ j\ g"hqt\ o\ cn"cppqwpeg\ o\ gpv"\ J\ g"vj\ kpmu"v\ j\ g"ec\ o\ rck\ i\ p"\ y\ knn"qhhgt"c"\ i\ tgcv"q\ r\ q\ tvwpkv{"vq"rtq\ o\ qvg"} \ cpf"etgcvg"\ o\ q\ o\ gpvw\ o\ "hqt"v\ j\ g"wpkxgtukv{"\ j\ cu"c"xgt{"gzrgtv"ngc}fgt"kp"vjg"} \ fkxkukqp."Okmg"Owtvcwi\ j\ ."vq"ngcf"vjg"ec\ o\ rck\ i\ p"Rtgukfgpv"\ J\ wcpi"cffgf"vjc"vjku"rcuv"cecfg\ o\ ke"{gct"uc\ y"vjg"} \ ugeqpf"jki\ j\ guv"hwpftckukpi"c\ o\ qwpv"kp"\ Y\ KWøu"jkuvqt{"y\ kvj"qxgt"&32"o\ knnkqp"tckugf0""} \ o\ knnkqp"tckugf0""$ 

 $Rtgukfgpv"J\ wcpi"kphqtogf"GzEq"ogodgtu"vjcv"ghhqtvu"vq"fgxgnqr"c"hkpcpekcn"uwuvckpcdknkv{"rncp"jcxg"dgiwp"cpf"yknn"jqrghwnn{"uqqp"dg"tgngcugf"hqtocnn{0"}\ Jg"gzrnckpgf"vjg"uwuvckpcdknkv{"rncp"ykm"rtqxkfg"iwkfcpeg"qp"yjcv"vtcem"pggfu"vq"dg"vcmgp"hqt"tgxgpwg"igpgtcvkqp0"Jg"tgncvgf"vjcv"hqtogt"Xkeg"Rtgukfgpv"hqt"Cfokpkuvtcvkxg"Ugtxkegu"Ocvv"Dkgtocp"kp"4234"kuuwgf"c"ogoq"vjcv"urgnngf"qwv"uqog"qh"vjg"hkpcpekcn"ygcmpguugu"qh"YkW"wr"vq"vjcv"vkog="kp"c"423:"ogoq."jg"rtqxkfgf"cp"wrfcvg"qp"vjg"korqtvcpeg"qh"jcxkpi"tgugtxg"hwpfu"hqt"vjg"wpkxgtukv{."ykvj"yjkej"Rtgukfgpv"Jwcpi"citggu0"Rtgukfgpv"Jwcpi"pqvgf"vjcv"qxgt"vjg"rcuv"vyq"{gctu"YkW"jcu"tgegkxgf"qxgt"&42"oknnkqp"}$ 

cvvgpf"vjg"itqwpfdtgcmkpi"egtgoqp{0"

 $kp"hgfgtcn"hwpfkpi"hqt"uvwfgpvu"cpf"wpkxgtukv{"qrgtcvkqpu"vq"cfftguu"vjg"ghhgevu"qh"vjg"Eqxkf"rcpfgoke."dwv"vjcv"hwpfkpi"gpfgf"vjku"uwoogt"hqt"kpuvkvwvkqpu"qh"jkijgt"gfwecvkqp0"Jg"pqvgf"vjcv"yjkng"YKW"jcf"c"&592.222"uwtrnwu"ncuv"{gct."vjku"{gct"ucy"vjg"wpkxgtukv{"kp"c"fghkekv"ukvwcvkqp"}}$ 

 $\label{thm:prop:condition} \begin{tabular}{ll} vjg"tgvgpvkqp"tcvg"vjku"hcnn" yknn"dg" yqtug"vjcp"Hcnn"4243."cpf"vjg"ejcpigu"dgkpi"rtqrqugf"eqwnf"rqukvkxgn{"korcev" uvwfgpvu"cfokvvgf"hqt"Hcnn"42450" } \end{tabular}$ 

Ejckt"Vjqoruqp"cumgf"kh"vjg"rtqrqugf"ejcpigu"yqwnf"equv"vjg"wpk

 $\label{thm:convergence} Uejqqn"qh"Gfwecvkqp."eqphktokpi"vjcv"Gfwecvkqp"hcewnv{"yknn"pqv"dg"fkuewuukpi"cpf"xqvkpi"qp"vjg"rtqrqucn"wpvkn"Ugrvgodgt"380"Ukpeg"vjku"ku"chvgt"vjg"pgzv"Hcewnv{"Ugpcvg"oggvkpi"qh"Ugrvgodgt"35."vjg"Gzgewvkxg"Eqookvvgg"fgekfgf"vq"rquvrqpg"rwvvkpi"vjku"kvgo"qp"vjg"cigpfc"wpvkn"vjg"Ugrvgodgt"49"Hcewnv{"Ugpcvg"oggvkpi."hqnnqykpi"vjg"Gfwecvkqp"hcewnv{"oggvkpi0_"$ 

 $7 + "Qpg" rgvkvkqp" gcej" y cu" tgegkxgf" hqt" vjg" tgegpv" gngevkqpu" hqt" Hcewnv \{ "Ugpcvg" cpf" vjg" Wpkxgtukv \{ "Rgtuqppgn" Eqookvvgg0" Mcvjgtkpg" Rgtqpg." F$ 

 $\label{thm:continuity} dgecwug" rgqrng" pggf" cp"kfgc" cdqwv" jqy" vjkpiu" yqtm0" Jg" uckf" jg" yqwnf" dg" eqpvgpv." jqygxgt." ykvj" vjg" Dwfigv" Vtcpurctgpe {"Eqookvvgg" lwuv" fguetkdkpi" vjg" ukvwcvkqp" cpf" fqkpi" c"ujqtv" tgrqtv" qp" fkueqwpv" tcvgu" hqt" uvwfgpvu" kp" igpgtcn0" }$ 

 $\label{thm:continuous} Ejckt"Vjqoruqp"uwiiguvgf"vjcv"GzEq"ejctig"vjg"Eqwpekn"hqt"Kpuvtwevkqpcn"Vgejpqnqi{"*EKV+"vq"tgrqtv" qp"jqy"owej"oqpg{"ycu"igpgtcvgf"d{"vjg"cfqrvkqp"qh"c"rcrgt"wucig"hgg"hqt"uvwfgpvu0"Jg"yqwnf"nkmg"vq" mpqy"jqy"owej"oqpg{"vjg"wpkxgtukv{"ku"ucxkpi"d{"fqkpi"vjku"cpf"jqy"kv"ku"dgkpi"urgpv"ó"pgy"eqorwvgtu" hqt"ncdu."dcpfykfvj."qvjgt"mkpfu"qh"kphtcuvtwevwtg."gve0"Ugpcvqt"Dtkeg"vjkpmu"kv"ku"cnuq"korqtvcpv"vq"mpqy"jqy"owej"uvwfgpvu"ctg"urgpfkpi"qp"rtkpvkpi"ukpeg"vjku"ejcpig0"Ejckt"Vjqoruqp"qdugtxgf"vjcv"uvwfgpvu"uggo"vq"hcktn{"swkemn{"twp"qwv"qh"vjgkt"472"rcig"nkokv"*722"rcigu"htqpv"cpf"dcem+"cpf"ctg"uwtrtkugf"vjcv"vjg{"ctg"qpn{"cunqygf"vjku"owej"hqt"vjg"yjqng"{gct"cpf"pqv"d{"u$