



Hkgh\gZy ijhn\_kkbhgZevgZy h[jZah\ZI\_ev gZy ijh]jZffZ jZ  
N\_^\_jZevgh]h ]hkm^Zjkl\\_ggh]h h[jZah\ZI\_ev gZy ijh]kh khZg^ZjIZ  
ki\_pbZevghklb kjh^gk\bbhgZevgh]h h[jZah\Zgby >baZc  
ml\\_j`^\_ggh]h ijbdZahf FbgbkI\_jkl\Z ijhk\\_s\_gby JN < hl  
j\_^ hl \oh^ys\_c \ khklZ\ mdjmig\_gghc ]jmiiu ki\_p  
Bah[jZabl\_evgh\_ b ijbdZahf FbgbkI\_jkl\^u

J:KKFHLJ?GH  
gZ aZk\_^Zgbb l\_^Z]h]bq\_kdbc dhee\_`^a ]

JZajZ[hIqWv^Zj[b\\_ZiK\_ih^Z\ZI\_ev IHQM ©=mfZgblZjgh  
i\_^Z]h]bq\_kdbc dhee\_`^a

J\_p\_ga\_glu

->ZfZ^Zgh\Z KZb^Z JZfZaZgkh\jgZd i g >=IM O=N  
DZn\_^jZ >IB b f\_lh^bd\_ ij\_ih^Z\Zgby

-HfZjh\ FZ]hf\_^ FZ]hfijhh\kkhj d i g >=IM O=N  
DZn\_^jZ >IB b f\_lh^bd\_ ij\_ih^Z\Zgby

KH>?J@:GB?

1. I:KIHJL J;;HQ?C IJH=J:FFU MQ?;GH=H IJ?>F?L:

2. KLJMDLMBJ:KH>?J@:GB? MQ?;GH=H IJ?>F?L:

3. MKEH<BY:EBA:PBB MQ?;GH=H IJ?>F?

4. DHGHEV B HP?GD: J?AMEVL:LH< HK<H?GBY MQ?;GH=H  
IJ?>F?L

:>:IL:PB Y J;;HQ?C IJH=J:FFUB IH;MQ?G B B EBP K

H=J:GBQ?GG&F&FH@GHKLYFB A>HJH<VY

EBKL I?J?ML<?J@>?GBY :DLM:EBA:PBB J;;HQ?C IJH=J:FF

>BKPBIEBGU

1. I:KIHJL J:;HQ?C IJH=J:FFU MQ?;GH=H IJ?>F?L:

1.1 H[eZklv ijbfg\_gby ijh]jZffu

JZ[hqZy ijh]jZffu bkiebkg @bkmghd k hkgh\Zfb q\_jki\_ y\ey\_lky qZkbv\ghc ijhn\_kkbhgZevghc h[jh]ZjZffZl\ekvghc\_lkl\b k N=HK KIH ih ki\_pbZevghkbb aZcg ih hljZkeyf mdjmig\_ ki\_pbZevg5400\_00Bah[jZabl\_evgh\_ b ijbdeZ^gh\_ bkdmkkl\h JZ[hqZy ijh]jZffZ mq\_[gh]h ij\_^f\_lZ fh`\_l [ulv bkihevah\ ijhn\_kkbhgZevghf h[jZah\Zgbb

1.2 F\_klh mq\_[gh]h ij\_^f\_lZ \ kljmdlmj\_ hkgh\ghc ijhn\_kkbhgZ

h[jZah\Zl\_evghc ijh]jZffu Mq\_Zy^bkbpbiebgZ @bkmghd k hkgh\Zfb q\_ijkkgZab\ubI d h[s\_ijn\_kkbhgZevgbfmhp^bde]mijn\_kkbhgZevguc pbde

1.3. P\_eb b aZ^Zqb mq\_[gh]h [j\ZfgbZ d j\_amevlZlZf hk\h\_gby ij\_^f\_lZ

< j\_amevlZl\_ hk\h\_gby mq\_[gh]h ij\_^f\_lZnfh[vmqZxsbcy - \uihegylv jbkmgdb k gZlmju k bkihevah\Zgb\_f jZagh ijb\_fh\

- \uihegylv eb^ghgmjdb\guc jbkmgd ]\_hf\_ljbq\_kdbo l [ulZ b nb]mju q\_eh\\_dZ

- \uihegylv jbkmgdb k bkihevah\Zgb\_f bfy\_lhj^hkljZhgkllj\Z iehkdhklb

< j\_amevlZl\_ hk\h\_gby mq\_[ghc ^bkbpbiebagZhyvmqZxsbcf - ijbgpbiu i\_jki\_dlb\gh]h ihklfjhjggp\_yk\_dbo nhjf

- hkgh\gu\_ aZdhgu i\_jki\_dlb\u b jZkij\_^\_e\_gby k\\_lZ b ij\_^f\_lh\ ijb\_fu-[q\_ejgh]jZnbdb

- hkgh\gu\_ aZdhgu bah[jZ`\_gby ij\_^f\_lh\ hdjm`Zxs\_ q\_eh\\_dZ

Lj\_[h\Zgby d j\_amevlZlZf hk\h\_gby mjb\_ [gZ]hb ajZ^bblZkxh\ \ZjbZlb\ghc qZklb mq\_[guo pbdeh\ IIKKA

< j\_amevlZl\_ hk\h\_gby mq\_[gh]h ij\_^f\_lZnfh[vmqZxsbcy - kh\\_jr\_gkl\h\Zlv ]jZnbq\_kdb\_ gZ\udb \ ihemq\_gbb j\_Z

bah[jZ`\_gby - ih\urZlv dmevlmjm \hkijbylby hft^dckkl\bbly\ev\_gghklb - jZa\b\Zlv l\hj\_q\_kdb\_ kihkh[ghklb gZ hkgh\\_ ihagZgb

om^h`\_kl\\_ggh]h h[jZaZ < j\_amevlZl\_ hk\h\_gby mq\_[gh]h ij\_^f\_lZghZ[vmqZxsbcy

- ijbgpbiu b f\_lh^u j\_Zebklbq\_kdh]h bah[jZ`\_gby h[t\_fghc jbkmgdZ

-jZaebqgu\_ ]jZnbq\_kdb\_ l\_ogheh]bb b ijb\_fu -aZdhghf\_jghklb ijbjh^u b ijbjh^guo y\e\_gbc

Hk\h\_gb\_ kh^j`Zgby mq\_[gh]h ij\_^f\_lZ h[\_ki\_qb\Z\_l n  
ijhn\_kkbhgZevguo dhfi\_l\_gpbc

HD	<u[bjZlv kihkh[u j_r_gby aZ^Zq ijhn_kkbhgZevghc ^_ijbf_gbl_evgh d jZaebqguf dhgl_dklZf
HD	Bkihevah\Zlv kh\j_f_ggu_ kj_^kl\Z ihbkdZ ZgZebaZ bgnhjZpbhgggu_ l_ogheh]bb ^ey \uiheg_gby aZ^Zq ij
HD	leZgbjh\Zlv b j_Zebah\u\Zlv kh[kl\_ggh_ ijhn_kkbhgZebqghklgh_ jZa\blb_ ij_^ijbgbfZI_evkdmx ^_yl_evgh bkihevah\Zlv agZgby ih nbgZgkh\hc ]jZfhlgkib \ jZa
HD	Wnn_dlb\gh \aZbfh^bcjZ[h\Zlv \ dhee_dlb\_ b dhfZg^

ID JZajZ[Zlu\Zlv l\_ogbq\_kdh\_ aZ^Zgb\_ kh]eZkgh lj\_[h\Zg  
ID ljh\h^blv ij\_^ijh\_dlguc ZgZeba ^ey-jZajZ[h\dlb ^baZcg

1. Ebqghklgu\_ j\_amevlZlu j\_ZebaZpbb ijh]jZffu \hkiblZgby  
EJ HkhagZxsbc k\_[y ]jZ`^Zgbghf b aZsblgbdhf \\_ebdhc kljZ  
EJ ljh\eyxsbc Zdlb\gmx ]jZ`^Zgkdmx ihabpbx ^\_fhgklbjm  
ijbgpbiZf q\_klghklb ihjy^hqghklb hldjulhklb wdhghfb  
mqZkl\mxsbc \ klm^\_gq\_kdhf b lfjh\hZbeZevghf kZlhf qbke  
mkeh\byo ^h[jh\hevq\_kl\Z ijh^mdlb\gh \aZbfh^\_ckl\mxsb  
^\_yl\_evghklb h[s\_kl\\_gguo hj]ZgbaZpbc  
EJ Kh[ex^Zxsbc ghjfu ijZ\hih^dZ ke\_^mxsbc b^\_ZeZf ]  
h[\_ki\_q\_gby [\_ahiZkghklb^ijZ`^Zg\h]kkbb Ehyevguc d m  
ijhy\eyxsbc ij\_^klZ\bl\_e\_c km[dmevlmj hlebqZxsbc bo hl ]  
^\_lbZglguf ih\^\_gb\_f >\_fhgklbjmxsbc g\_ijbylb\_ b ij\_^mij  
hiZkgh\_ ih\^\_gb\_ hdjm`Zxsbo  
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kh[kl\\_ggh]h ljm^Z Klj\_fysbcky d nhjfbjh\Zgbx \ k\_l\\_hc  
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EJ >\_fhgklbjmxsbc ijb\\_j`\_gghklv d jh^ghc dmevldmgZ b  
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EJ ljh\eyxsbc m\Z`\_gb\_ d ex^yf klZjr\_]h ihdhe\_gby b ]  
khpZevghc ih^^\_j`d\_ b \hehgl\_jkdbo ^\b`\_gbyo  
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b qm`mx mgbdZevghklv \ jZaebqguo kblmZpbyo \h \k\_o nhjf  
EJ ljh\eyxsbc b ^\_fhgklbjmxsbc m\Z`\_gb\_ d ij\_^klZ  
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EJ Kh[ex^Zxsbc b ijhiZ]Zg^bjmxsbc ijZ\beZ a^hjh\h]h b  
`bagb kihjIZ ijij`^Zxsbc eb[h ij\_h^he\_\Zxsbc aZ\bkbfbklb

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EJ ljbgbfZxsbc k\_f\_cgu\_ p\_gghklb ]hlh\uc d kha^Zgb  
^\_l\_c ^\_fhgkljbjmxsbcjbylb\_ gZkbeby \ k\_fv\_ moh^Z hl  
hl\\_lkl\\_gghklb hldZaZ hl hlghr\_gbc kh k\hbfb ^\_lvfb b bo r  
  
Ebqghklgu\_ j\_amevlZlu j\_Zebazpbb \hkiblZgby^\_e\_ggu\_  
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EJ <u[bjZxsbc hilbfZevgu\_ kihkh[u j\_r\_gby ijhn\_kkbhgZev  
m\Z`\_gby d aZdZaqbdm ihgbfZgby\_]h ihlj\_[ghkl\_c  
EJ ljbgbfZxsbc b bkihegyxsbc klZg^Zjlu Zglbdhjjmipbhgg  
EJ ljh\eyxsbc kihkh[ghklb d ieZgbjh\Zgbx b \\_^\_gbx  
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j\_]bhgZ \ dhlhjhfgZoh^blky ij\_^ijbylb\_ mqZklb\_ \  
ijh\_dIZo \g\_^jy\_fuo ij\_^ijbylb\_f \ kn\_j\_ ^baZcgZ  
EJ Kh[ex^Zxsbc ljm^h\mx wlbdb b Zmscbvdkym ijb^\_j`b\  
\gmlj\_gg\_]h MklZ\Z b ijZ\be ljm^h\hc wlbdb ij\_^ijbylbc  
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qZklb \uiheg\_gZgy h kly\_ac

Dhebq\_kl\h qZkh\ gZ hk\h\_gb\_ jZ[hq\_cijj h]jZffu mq\_[gh]h  
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h[yaZl\_evgy Zm^blhjgZy mq\_[gZy gZ]jm adZ \h[knZd k ksh\_y]h\_keyv  
jZ[hIZ h[mqZxs\_]qZkh\

2. KLJMDLMJ: B KH>?J@:GB? MQ?;GH=H IJ?>F?L:

2.1. H[t\_f mq\_[gh]h ij\_^f\_IZ b \b^u mq\_[ghc jZ[hlu

<b^ mq_[ghc jZ[hlu	H[t_f qZkh
FZdkbfZevgZy mq_[gZy gZ]jmadZ \k_]	214
H[yaZl_evgZy mq_[gZyh gZ]jmadZckl\b ij_ih^Z\Zl_e_f	166
\l.qnhjfijZdlbq_kdhc ih^]hIh\db	
e_dpbb	
ijZdlbq_kdb_ aZgyIby	166
dmjk ijh_dlbjh\Zgby	20
KZfhklhyl_evgZy jZ[hIZ h[mqZxs_]hky	28
Ijhf_`mlhqgZy ZII\klZjpbZq_IZ b wdaZf_	

1.3L\_fZlbq\_kdbc ieZg b kh^\_j`Zgb\_ mq\_[gh]h ij\_^f\_lZ



GZbf_gh\Zgb_ jZa^_	Kh^_j`Zgb_ mq_[gh]h fZI_jbZeZ eZ[hjZihjgu_ aZgylby kZfhklhyl_evGZy jZ[hIZ h[mqZ	H[t_f qZkh	Dh^u dhfi_l_gp nhjfbjh\Zg dhlhjuo
1	2	3	4
<\_^_gb_			
JZa^_e Jbkmghd dZd hkggh\Z bah[jZabl_evgh]h bkdmkkl\Z			
L_fZ H[sb_ ihgylby h	ljZdlbq_kdh_ aZgylb_	34	HD -HD
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dhgkljmdpbb	ljZ\bevgZy ihkZ^dZ aZ fhev[_jlf mf_gb_ ^_j`Z fhev[_jlf H[t_fgZy nhjfZ iehkdhklgZy ebg_c dhgkljmdpbb ij_^f_IZ	2	
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	lhgylb_ i_jki_dlb\Z Ebgby ]hjbahglZ Lhqdz kd		
	ebg_cgh_ b lhgZevgh_ j_r_gb_ ijhkljZgkl\Z		
	lhqdZfb koh^Z lhgylb_ rljboh\db <b^u rljboZ		
	iehkdhklb \ i_jki_dlb\_ Bah[jZ`_gby iehkdhkl_c \ i_jki_dlb\_	6	
	Lhqdb koh^Z \ i_jki_dlb\_ Bah[jZ`_gby ijhkluo ]_hf_ljbq_kdbo nb]mj \ i_j	6	
	lhqdZfb koh^Z Weebiku \ ijhkljZgkl\_ Bah[jZ`_gby ijhkluo ]_hf_ljbqi_kdbod hbl]jh_gb	8	
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	rl nhjfZ:IZ.		

	FZI_jbZe ^ey \uihDeZjZgbyZr nehfZkl_j p\_lghc d fZI_jbZe		
L_fZ Dhgkljmdlb\gheb	ljZdlbq_kdb_ aZgylby	26	HD - HD ID, ID ID
aZjbkh\db ]bikh\uo l_e	Dhgkljmdlb\gheguc jbkmghd ]bikh\uo ]_hf_ljbc	2	
jZaguc oZjZdl_j nhjfu	Hkgh\gu_ aZdhghf_jghklb i_jki_dlb\gh]h i		
dhgmk ibjZfb^Z ijbaF	bah[jZ`Z_fh]h ij_^f_lZ		
	Dhgkljmdlb\gheg_cgh_ ihkljh_gb_ dm[Z b dhgmkZ Hk\h_gb_ igZdlbd_ hkgh\guo aZdhghf_jghkl_	8	
	ihkljh_gby dhgkljmdpbb dm[Z b dhgmkZ k jZa lhqdZfb koh^Z K\_lhl_g_\Zy ijhjZ[hldZ h[t_dlh\ k mq_lhf jZagu		
	Bah[jZ`_gb_ ibjZfb^u b ijbaFu	8	
	ljZ\beZ kd\hichk]h_gby k mq_lhf i_jki_dlb\gh]h h[t_dlh\		
	Kihkh[u jbkx\Zgby rZjZ		
	:gZebIbq_kdh_ ihkljh_gb_ rZjZ jZagufb kihk	8	
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	FZI_jbZe ^ey \uihDeZjZgbyZr nehfZkl_j p\_lghc d fZI_jbZe		
JZa^_e Hkgh\u l_hjbb	k\_lhl_gb		HD - HD ID
L_fZ Jbkmghd gZlxjfh	ljZdlbq_kdh_ aZgylb_	10	ID
]_hf_ljbq_kdbo ]bikh\u	AZdj_ie_gb_ gZ\udh\ dhgkljmdlb\gh]h ihkljh_gb	2	
\uy\e_gb_f h[t_fZ ij_^f	Nhjfbjh\Zgb_ ij_^klZ\e_gby h aZdhghf_jghklyo j		
gZlxjfhjlZ q_j_a hk\_s	h[t_fg_uo ]_hf_ljbq_kdbo b hdjm]euo l_eZo		
	l_j_^ZqZ hkh[_gghkl_c e_idb h[t_fg_hc nhjfu ijf	2	
	ihch`_gby wlbo ij_^f_lh\ gZ iehkdhklb		
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	ljZ\beZ dhfihgh\db bah[jZ`_gby gZ ebkl_ [mfZ]k hJgZf_glZ b _]h ^_lZe_c <uy\e_gb_ k ihfhsvx k\_lhl_gb nhjfu hJgZf_glZ b	2	
	= bikh\Zy jha_ldZ k hkvx kbff_ljbb lhkljh_gb_ jbkmgdZ ]bikh\hc jha_ldb k hkvx kbff_ljbb	10	
	=bikh\Zy jha_ldZ k hkvx kbff_ljbb lhkljh_gb_ jbkmgdZ ]bikh\hc jha_ldb k lhqdhc k	8	
	Keh`gZy ]bikh\Zy jha_ldZ lhkljh_gb_ jbkmgdZ g_ kbff_ljbqghc F Zb i k b Zrec ^jdy	10	
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L_fZ Jbkmgd ^jZibjh	ljZdlbq_kdh_ aZgylb_	10	HD - HD 04, ID ID
	Hkgh\gu_ \b^u kdeZ^hd ljbgpbui h[jZah\Zgby kdeZ^hd gZ ldZgyo	2	
	Hkh[_gghklb fh^_ebjh\db kdeZ^hd \ jbkmgd_	2	

	Bamq_gb_ \hafh`ghkl_c jZaguo fZI_jbZeh\ jbi_j_^Zqb j_ev_nZ b oZjZdl_j kdeZ^hd		
	Jbkmghd ^jZibjh\db Bah[jZ`_gb_ ^jZikhhkdbZ^dZfb k ijbf_g_gb_f jZ fZI_jbZeh\ FZI_jbZe ^ey \uiheg_g[mfZ]Z gbyjZg^Zr m]hev	6	
	KZfhklhyl_evgy jZ[hIZ h[mqZxsboky Bamq_gb_ b aZjbkh\db Zjobl_dlmjguo we_f_g we_f_glu ^b@lhjZ_jZ dhgkljmdlb\gu_ we_f_glu we_f_gIZfb f_[_eb r-B. nhjfZI : FZI_jbZe ^ey \uiheg_gby dZjZg^Zr dZjZg^Zr F	4	
L_fZ Jbkmghd gZlxjfh ]_hf_ljbq_kdbo l_e ih \hh[jZ`_gbx	ljZdlbq_kdh_ aZgylb_ <j_adZ \ dhfihabpbb lhkljh_gb_ dhfihabpbb ba ]_hf_ljbq_kdbo l_e k ^jm]h_ Kd\hagZy ijhjbkh\dZ i_j_k_q_gby l_e \jZs_gby k	16	HD - HD ID
	KZfhklhyl_evgy jZ[hIZ h[mqZxsboky < GZlmjgu_ jbkmgdbgu_ jbkmgdb gZlxjfhjh\ ba ]_ ijhjbkh\dhc g_\b^bfuo ebgb c FZI_jbZe ^ey \uiheg_gby aZ^Zgby [mfZ]Z dZjZ	2	
L_fZ Jbkmghd gZlxjfh [ulh\uo ij_^f_lh\ k ^jZi	ljZdlbq_kdh_ aZgylb_ P_ehklgh_ \hkijbylb_ ]jmiiu jZaguo ih nhjf_ fZI_jbZevghklb ij_^f_lh\ khklZ\eyxsbo ihklZgh\ HagZdhfe_gb_ k ijZdlbq_kdbfb jib_fZfb h[h[s_g a\mqZgby \k_]h gZlxjfhjZ	16	HD - HD ID
	GZlxjfhjl k ^jZibjh\dhc HljbkhdZ gZlxjfhjIZ ba [ulh\uo l_e k ^jZib ijhZ[hldZ FZI_jbZe ^ey \uiheg_g[mfZ]Z gbyjZg^Zr	4	
		12	

	KZfhklhyl_ evgZy jZ[hIZ h[mqZxsboky Bkke_ ^h\Zgb_ klbe_c \ f_[_eb AZjbkh\db f_[_e bgl_jv_j_ rl n-5.jfZI : FZI_jbZe ^ey \uihDeZjZgb^Zr	2	
L_fZ Jbkmghd ]bikh\h Zjobl_dlmjgh]h weZifb_lg dhgkljmdhfyhabpby l	ljZdlbq_kdh_ aZgylb_ Dhfiugh\dZ bah[jZ`_gby GZ[jhkhd hkgh\ghc nhjfu ij_^f_IZ ihdZaZlv ijZ\ khhlg hr_gb_ we_f_glh\ ij_^f_IZ \ aZjbkh\d_ Bkihevah\Zgb_ \ujZabl_evg hklb]h fZI_jbZeZ	6	HD - HD ID ID
	Jbkmghd Zjobl_dlmjgh]h we_f_gIZ GZjbkh\Zlv ]bikh\uc Zjobl_dlmjgh]h we_f_gIZ dhfihabpby lhg Dhfihabpbhgg_u_ aZjbkh\db bgl_jv_jZ l_fZl_bq_k jZaebqguo ]jZnbq_kdbo fZI_jbZeh\		
L_fZ Jbkmghd bgl_jv dhfihabpby b dhgkljm	Kh^_j`Zgb_ mq_[gh]h fZI_jbZeZ 1. l_j_^ZqZ ijhkljZgkl\_gguo ieZgh\ bgl_jv_jZ dh dhfihabpbhgg]h we_f_gIZ p_ ehklghklb \k_]h jf l_j_^ZqZ hk\_s_gghklb bgl_jv_jZ \ jZ[hI_ gZ^ ljZdlbq_kdh_ aZgylb_ < ljhkljZgkl\h bgl_jv_jZ lhkljh_gb_ ijhkljZgkl\Z bgl_jv_jZ k ^\mo jZdmjk	6	
	KZfhklhyl_ evgZy jZ[hIZ h[mqZxsboky AZjbkh\db bgl_jv_jZ #l nhjfZI : FZI_jbZe ^ey \uihDeZjZgb^Zr F p\_lghc dZjZg^Z dZjZg^Zr rZjbdh\Zy jmqdZ	2	
L_fZ GZ[jhkdb bgl_jv f_lh^u ijb_fu b kj_^k \ujZabl_evghklb	ljZdlbq_kdh_ aZgylb_ Dhfiugh\dZ bah[jZ`_gby lhgylyby djZldhkjhgguc jbkmghd aZjbkh\db gZ F_lh^u ijb_fu kj_^kl\Z \ujZabl_evghklb	8 2	HD - HD ID ID

	KZfhkllhyl_evgy jZ[hIZ h[mqZxsboky AZjbkh\db Zjobl_dlmjguo we_f_glh\ k 5Zf zlj_ujbZr ^ey \uihegd_zjzg^Zr	2	
L_fZ Jbkmghd ]bikh\u	ljZdlbq_kdh_aZgylb_	8	HD -HD ID ID
ebpZ fZkdb ©->Za_b\Za k	AZdhghf_jghklb kljh_gby b f_lh^u bah[jZ`_gby ^ ghk ]m[zaZ moh	2	
kdmevilmju Fbd_eZg^`	QZklb ]bikh\hc-fZkdb]m[u AZdhfihgh\Zlv gZ ieZgr_l_ b dhgkljmdl\b\gh ijhjt fZkdb]ghk b ]m[u	6	
	QZklb ]bikh\hc-fZkdb moh AZdhfihgh\Zlv gZ ieZgr_l_ b dhgkljmdl\b\gh ijhjt fZkdb]eZa b moh	6	
	KZfhkllhyl_evgy jZ[hIZ h[mqZxsboky Bkke_^h\Zgb_ebl_jZlmju hibku\Zxs_c ihkljh_g qZkl_c ebpZ k ]bikh\uo ke_idh\ \ jZaguo iheh`_	2	
	Blh]h	q	

3.MKEH<BY J?:EBA:PBB MQ?;GH=H IJ?>F?L:

Lj\_[h\Zgby d fbgbfZevghfmIfZlg\_bjZ\_khlfki\_q\_gbx  
>ey j\_ZebaZpbb ijh]jZffu mq\_[ghc ^bkpbiebgu ij\_^mkf  
ki\_pbZevgu\_ ihf\_s\_gby \ khhl\ \_HkHbb k N=HK b  
- dZ[bg\_l hkgZs\_gguc h[hjm^h]Zug\_b\_fhkZ^hqu\_ f\_kl  
h[mqZxsboky b ij\_ih^Z\ZI\_ey deZkkgZy ^hk,dZ\_o@Zdekdgu  
kj\_^kl\Z h[mqglg\_jZdlb\gZy ^hkdZdhfjlv\_xdlhj  
- dZ[bg\_l ^ey kZfhklyh\uevg hc jZ[

3.2.BgnhjZpbhggh\_ h[\_k]mq\_gby

>ey j\_ZebaZpbb ijh]jZffu [b[ebhl\_qguc nhg^ h[jZah\Z  
bf\_\_l\_qZlgu\_ we\_dljhggu\_ h[jZah\ZI\_evgu\_ b bgnhjZpb  
bkihevah\Zgby \ h[jZah\ZI\_evghf ijhp\_kk\_

3.2.1.Hkgh\gu\_ bklhqgbdb

1. KdZdh\Z : = Jbkmghd b `b\hibkv mq\_[gl  
ijhn\_kkbhgZevgh]h h[jZah\Zgby^ Fhk\ZKdZah\Z evkl\h XjZcl  
^2 k^2 Ijhn\_kkbhgZevgh\_ h[jZah\Zgby^ ISBN 978-5-534-113600. ^2 L\_dkl  
we\_dljhguc W;K XfURL:https://u@it.ru/bcode/475748

2. <hedh\Z L B Jbkmghd mq\_[gh\_ ihkh[b\_ ^ey klm^\_g  
- Mevygh\kd Me=LMk

3.2.2.>hihegbl\_evgu\_ bklhqgbdb

1. Dbf[\_jeb WeZf =\_hf\_ljby ^baZcgZ Ijhijpbb b dhfih  
Dbf[\_jebKI[ Ibl\_j - k

2. Fh]be\_\p\_\ < : Hkgh\u jbkmgdZ mq\_[gh\_ ihkh[b\_ >L  
A. : Fh]be\_\p\_K[] :JLBG>?DK- k be

3. Eb G Hkgh\u mq\_[gh]h ZdZ^\_fbq\_kdh]h jbkmgdZ  
Kmkeh\ : < Jbkmghdh^mq\_[gh]h[b\_ >L\_dkl@

B. < Kmkeh\ K : RkZob\Zklh-dh Ba^MK - k

4. E\_[\_^dh < D Jbkmghd \q\_jZ k\_]h^gy aZ\ljZ mq\_[f  
E\_[\_^dh @ljhfbl\_c^a- k be

5. RZjh\ < K :dZ^\_fbq\_kdh\_ h[mq\_gbn\_bkalm[kZa\bm\_emgh  
>L\_dkl@ <KF RZjWdkfh- k

6. ;Zc\_j < ? :jobl\_dlmjgh\_ fZI\_jbZeh\\_^\_gb\_ mq\_[gbd  
;Zc\_j :JOB L?DLMKJ: - k

7. D\_gb] I =jZnbq\_kdbc jbkmgd ^ey ijhn\_kkbhgZe  
ba^ZgdL\_dkl@ DKg[b] Ibl\_j - k be  
- F Ba^h Wdkfh - k

8.H[jZah\ZI\_evgy ieZlnhjZ XjZcl KWWSV XUDLW UX

3.2.3. Bgl\_jg-jlkmj:ku

1. KdZdh\Z : = Jbkmghd b `b\hibkv mq\_[gbd ^ey kj\_  
h[jZah\Zgby : = ^2 KfZkdh\Z Ba^ZI\_evkl\h XfZcl k^2

Ijhn\_kkbhgZevgh\_ h[jZah\Zgby ISBN 9785-534-113600. ² L\_dkl we\_dljhggu  
W;K XjZcl >K URL@https://urait.ru/bcode/475748

2. JZ[bgh\bq F P leZklbq\_kdZy ZgZlhfby q\_eh\\_dZ q\_ah  
ilbp mq\_[gbd ^ey kj\_^g\_]h ijhn\_kkbhgZevgh]h h[jZah\Zgby  
ba^ bkij Fhk d\Z Ba^ZI\_evkl\h XjZcl k² Ijhn\_kkbhgZevgh  
h[jZah\Zgby ISBN 9785-534-078961. ² L\_dkl we\_dljhggu W;K² XjZcl  
URL: https://urait.ru/bcode/470526

3. Euk\_gdh\ G D leZklbq\_kdZy ZgZlhfby mq\_[  
ijhn\_kkbhgZevgh]h h[jZah\Zgby G D jEuk\_gdh Fhk d\Z B  
Ba^ZI\_evkl\h XjZcl k² Ijhn\_kkbhgZevgh\_ h[jZah\Zgby  
534-070026. ² L\_dkl we\_dljhggu W;K XjZcl URL>kZcl  
https://urait.ru/bcode/455353

4. >m[jh\bq < F Hkgh\u bah[jZabl\_evgh]h h[kd\_m kley Z  
kj\_^g\_]h ijhn\_kkbhgZevgh]h h[jZah\Zgby < F >m[jh\bq ih  
Dhj\_rdh\Z 2\_ ba^ Fhk d\Z Ba^ZI\_evkl\h XjZcl k²  
Ijhn\_kkbhgZevgh\_ h[jZah\Zgby ISBN 9785-534-114300. ² L\_dkl we\_dljhggu  
W;K XjZcl URL@https://urait.ru/bcode/476172

5. ;Zjurgbdh\ : I Hkgh\u dhfihabpbb : I ;Zjufgbdh\  
Fhk d\Z Ba^ZI\_evkl\h XjZcl k² :glheh]by fuk ISBN 9785-534-  
107753. ² L\_dkl we\_dljhggu W;K URL>kZcl@

DHGLJHEV B HP?GD: J?AMEVL:LH< HK<H?G  
MQ?;GH=H IJ?>F?L:

Dhgljhev b hp\_gdZ j\_amevlZlh\ hk\h\_gby mq\_[g  
ij\_ih^Z\ZI\_e\_f \ ijhp\_kk\_ ijh\\_^\_gby ijZdlbq\_kdbo aZ  
l\_klbjh\Zgby XulZdg\_gby h[mqZxsfbfky bg^b\b^mZevg  
bkke\_^h\Zgbc

J_amevlZlu h[mq_gby hk\h_ggu_ agZgby	Nhjfu b f_lh^u dhgljhey hp_gdb j_amevlZlh\ h[n
mf__l \uihegylv jbkmgdb k gZlmju jZaghh[jZah\Zgby ijZdlbq_kdbo ijb_fh\	hijhk ijh\_jdZ b hp_gdZ a kZfhklhyl_evghc jZ[hlu \u ijZdlbq_kdbo aZ^Zgbc
mf__l \uihegylv-edbgkjgmdlb\guc jb ]_hf_ljbq_kdbo l_e ij_^f_lh\ [ulZ q_eh\_dZ	\uiheg_gb_ ijZdlbq_kdboc
mf__l \uihegylv jbkmgdb k bkihevah\ ihkljh_gby ijhkljZgkl\Z gZ iehkdhk	\uiheg_gb_ ijZdlbq_kdbo
mf__l kh\_jr_gkl\h\Zlv jZnbq_kdb ihemq_gbb j_Zebklbq_kdh]h bah[jj	\uiheg_gb_ ijZdlbq_kdbo



mf__l ih\urZlv d mkekijbnj hby h[t_dlh yle_gbc ^_ckl\bl_evghklb	hijhk aZsbIZ kZfhklhyl_e l_f_ ijh\_jdZ b hp_gdZ az
mf__l jZa\b\Zlv l\hjg_kdb_ kihkh[ ihagZgby jZaebqguo mjh\g_c om^h	hijhk aZsbIZ kZfhklhyl_eh l_f_ ijh\_jdZ b hp_gdZ az
agZ_l ijbgbpbu i_jki_dlb\gh]h ihklj ]_hf_ljbq_kdbo nhjf	hijhk ijh\_jdZ b hp_gdZ a kZfhklhyl_evghc jZ[hlu \u ijZdlbq_kdbo aZ^Zgbc
agZ_l hkgh\gu_ aZdhgu i_jki_dlb\ k\_IZ b l_gba hijljZ`_gbb ij^f_lh\ i q_jg[h_ehc ]jZrahZb_l aZdhghf_jghkl ijbjh^guo yle_gbc	ih^]hlh\dZ ^hdeZ^h\ b ij_a luiheg_gb_ ijZdlbq_kdbo

:>:IL:PBY J:;HQ?C IJH=J:FFB H;MQ?GGB EBP K  
H=J:GBQ?GGUFB <HAFH@GHKLYFB A>HJH<VY

:^ZilZpby jZ[hq\_c ijh]jZffu ^HkpbiedBKM~~GH~~D K HKGH<:FB  
l?JKI?DLB<Ujh\h^blky ijb j\_ZebaZpbb Z^Zilb\ghc h[jZah\ZI\_ev  
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a^hjh\vy gZ iheihm\_gk\_kbhgZevgh]h h[jZah\Zgby kha^Zgby g  
ihemq\_gby kj^g\_]h ijhn\_kkbhgZevgh]h h[jZah\Zgby mkeh\bc  
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a^hjh\vy j\_amevlZlh\ nhjfbjh\ZgbjyuljZdlbq\_kdh]h

H[hjm^h\ZgZ[bg\_IZ ^\_ehijhba\h^kl\Z b j\_`bfZ ^eky\_dj\_lgh  
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HkgZs\_gb\_ dZ[bg\_IZ ^\_ehijhba\h^kl\Z b j\_`bfZ k\_dj\_lghkl  
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\hafh`ghklyfb a^hjh\vy DZ[bg\_lu ^he`gu [ulv hkgZs\_gu h[hjm^  
f\_klZfb k l\_ogbq\_kdbfb kj^kl\Zfb h[mq\_gby ^ey h[mqZxsboky  
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DZ[bg\_\ dhlhjh h[mqZxlky ebpZ k gZjmr\_gg\_bulvkle[mqZ^h\Zg  
jZ^bhdeZkkhf dhfivxl\_jghc l\_ogbdhc Zm^bhl\_ogbdhc \b^\_h  
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>ey keZ[h\b^ysbo h[mqZxsboky] ^mkfZljb\Zxlky ijhkfhlj  
m^Ze\_gguo h[t\_dlh\ ijb ihfhsb \b^\_hm\ \_ebggh]he\_cjhkehyljZm^Z  
Bkihevah\Zgb\_ ;jZce\_\kdhc dhfivxl\_jghc l\_ogbdb we\_dljhg  
g\\_bamZevgh]h ^hklmiZ d bgnhjZpbb l\_ogbq\_kZfb mjg^klhcij  
bgnhjZpbb \ ^hklmiguo nhjfZo

>ey h[mqZxsboky k gZjmr^gb]Zfl heivgh]hZ dZ[bg\_l ^he`\_g  
[ulv h[hjm^h\Zg i\_j\_`b`gufb j\_]mebjm\_fufb iZjIZfb k bklhqqbdh  
<ur\_mdZaZggh\_ hkgZs\_gb\_ mklZgZ\eb\Z\_lky \ dZ[bg\_l\_ ijb  
ih Z^Zilbjh\Zgghc h[jZah\ZI\_evghc ijh]jZff\_ k mq\_lhf bf\_xs\_]h  
a^hjh\vm h[mqZxs\_]hky

BgnhjZpbbhggh\_ b f\_lh^bq\_kdh\_ h[\_ki\_q\_gb\_ h[mqZxsboky

```

>hklni d bgnhjZpbhgguf b [b[ebh]jZnbq_kdbf j_kmjkZf
jZ[hq_c ijh]jZffu ^he`_g [ulv ij_^klZ\e_g \ nhjfZo Z^Zilbjh\Zg
a^hjh\vy h[mqZxsby_ky bg\Zpbk h]jZgbq_ggufb \hafh`ghklyfb a^h
>ey ebp k gZjmr_gbyfb aj_gby g_f_g__ h^gh]h \b^Z
-\ i_qZlghc nhjf_ m\_ebq_gguf rjbnlhf
-\ nhjf_ we_dljhggh]h ^hdmf_glZ
-\ nhjf_ Zm^bhnZceZ
-\ i_qZlghc nhjf_ gZ yaud_ ;jZcey
>ey ebp k gZjmke_gbyfb
-\ i_qZlghc nhjf_
-\ nhjf_ we_dljhggh]h ^hdmf_glZ
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-\ i_qZlghc nhjf_
-\ nhjf_ we_dljhggh]h ^hdmf_glZ
-\ nhjf_ Zm^bhnZceZ
>ey ebp k -g_k_p\ghq_kdbfb gZjmrZ_kklyfb kl\h Zmlbq_kdh]h ki_
gZjmr_gb_ ikbobq_kdh]h jZa\blby
-bkihevah\Zgb_l_dklZ k beexkljZpbyfb
-fmevlbf^bcgu_fZI_jbZeu
<h \j_fy kZfhklhyl_evghc ih^]hlh\db h[mqZxsby_ky bg\Z
h]jZgbq_ggufb \hafh`ghklyfb a^hjh\vy ^hpe`g w ^bklmhf_kd k_lb
Bgl_jg_l

```

Nhjfu b f\_lh^u dhgljhey b hp\_gdb j\_amevlZlh\ h[mq\_gby

```

MdZaZggu_ \ i ijh]jZffu nhjfu b f_lh^u dhgljhey ijh\h
h]jZgbq_gby a^hjh\vy h[mqZxsbyky P_evx l_dms_]h dhgljhey
\uy\e_gb_ gZgimc^ b hklZ\Zgby h[mqZxs_]hky k h]jZgbq_ggufb
a^hjh\vy b \g_k_gb_ dhjj_dlb\h\ \mq_[gmx^_yl_evghklv
NhjfZ ijhf_`mlhqghc Zll_klZpbb mklZgZ\eb\Z_lky k mq_lh
ikbohnbabq_kdbo hkh[_gghkl_c h[mqZxsbyky bg\Zgpbk b e
\hafh`ghklyfb a^hjh\vy mklgh ibkvf_ggh gZ [mfZ]_ ibkvf_ggh
l_klbjh\Zgby b l i
ljb ijh\_^_gbb ijhf_`mlhqghc Zll_klZpbb h[mqZxs_fmky ij_
gZ ih^]hlh\dm d hl\_lm m\_ebq_ggh_ g_ [he\e_ggfh]h ^jby jZ
ih^]hlh\db d hl\_lm h[mqZxsbfky g_bf_xsbh]jZgbq_gbc \khkl

```

6.EBKL I?J?ML<?J@>?GBY :DLM:EBA:PBB J:;HQ?C IJH=J:FF

>BKPBIIEBGU

Mq_[guc ]h^	<g_k_ggu_ baf_g_gby	lj_ih^Z\ZI_ NBH	ljhlhdhe aZk_^Zgby dZn ghf_jNBH aZ\ dZn_^jhc

