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(I thi g[m 5 trang)

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Thẻ gian làm bài: 90 phút;
(50 câu trắc nghiệm)

0 m ÿ Å WKL

H Ọ tên thí sinh:..... SBD:.....

&kX &KR Kjp VÕ FyOLFpx YjOLFpx .K·QJ yĩQK QjRyngDX yk\ Oj
\$ × WKİ Kjp VÕ ÿm FKR Fy KDL WLËPy F±QyQJDQJ Oj FiF ÿmá
% × WKİ Kjp VÕ ÿm FKR Fy KDL WLËPx F±QxQJDQJ Oj FiF ÿmá
& × WKİ Kjp VÕ ÿm FKR Fy ÿ~QJ PÝW WLËP F±Q QJDQJ
' × WKİ Kjp VÕ ÿm FKR NK{QJ Fy WLËP F±Q QJDQJ

&kX &KR KuQK FKys Wí JLiF yÅX Fy W7QWKFSRMIEQF FQK JyÅX JLiFQJF
Yj PÝW P»W yil

\$ - %√ & - '√

&kX 7URQJ NK{QJ JLDQ Dylz KĖP WUéF BWÑD yYC %LĂW UµQJ
ABCD Oj KuQK EuQK KjqK DNİUj yy W¥R yY yLÇP

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&kX &KR Kjp VÕ x x 0EQK yÅ QjRy~QJX yk\
\$ +jP VÕ y×QJ ELĂQ WUrQ PUL NKRSQJ
%+jP VÕ y×QJ ELĂQ WU%Q NKRSQJ
&+jP VÕ QJKİFK ELĂQ WUrQ NKRSQJ
' +jP VÕ y×QJ ELĂQ WUrQ

&kX ĐQA JñL WLĂW NLËP YjRWQİKĖ XjQJ QJ WİLQJOYj¥QmIN WX
Q P +ÓL QDPXWKİQJ WKu{QD QKLAQÿmçF Oj EDR QKLrX" Q
JLDQ JñL {QJ NK{QJ U~W OmL UD NKÓL QJkQ KjqJ"

\$ T WULËX y×QJ %T WULËX y×QJ
& T WULËX y×QJ ' is iQ NKİF

&kX &KR WİABCDËQy KDL P»ABCSKYjQBD F•QJ YX{QJDBCF YİBE
YjDF Oj KDL ÿmáQJ FDBCFĐĐ WDPy mĖLQF FDR AED WİBİ QLiF
NK·QJsyİQWURQJ FiF NK·QJ yĩQK VDX"
\$ ABE A ADC % ABD A ADC & ABC A DFK ' DFK A ADC

&kX 0ÝW yÝL J×P QDP Yj Qó /±S PÝW QMYtQ K×[PF VQJmáLy QKiW
QJmáL ÿmçF FKÑQ Fy tW QK©W Qó

\$ $\frac{56}{143}$ % $\frac{87}{143}$ & $\frac{73}{143}$ ' $\frac{70}{143}$

&kX 7tQK WKÇ WtFK FëD NKÖL WUé ELÄQW Eji QWKLÄW jLËQ DyK tQX
PÝW KuQK YX{QJ

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&kX &KR NKÖL O QJ WUé FëD Jä ~~Ä~~ ~~Ä~~ ~~Ä~~ Oj WDP JLiF YX{QJ FkQ V
 $AC=a\sqrt{2}$ 7tQK WKÇ FëD NKÖL O QJ WUé ÿm FKR

\$ $V=\frac{a^3}{6}$. % $V=\frac{a^3}{3}$. & $V=\frac{a^3}{2}$. ' $V=a^3$.

&kX &KR KuQK ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ Oj KuQK EuQK ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ KHR WKí W
WUXQJ ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ .K·QJ ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ Qj ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ VDX ÿk\

\$ (NOM) F~~Ä~~(NM). %(MON) (SBC).

& (PON)n(MNP)=NP. ' (NMP) (SBD).

&kX

0ÝW WURQJ FiF ÿ× WKİ ã KuQK YÁ ErQ Oj

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&kX &KR KuQK QyQ Fy WKLÄW GLËQ TXD{WUÉ FëD FëD KÄQK QyQ Y
EµQ~~Ä~~ 'LËQ WtFK [XQJ TXDQK FëD KuQK QyQ EµQJ

\$ $\frac{\pi}{\sqrt{D}}$ % $\frac{\pi}{\sqrt{D}}$ & $\sqrt{Ä}$ ' $\sqrt{Ä}$

&kX &KR WD ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ W ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ O«Q OmçW Oj WUXQJ ÿL
BC AC AB FëD W ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ JLiE ÿy SKpS Yİ Wö ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ WDPJLi
ABC "

\$ 3KpS Yİ ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ % 3KpS Yİ ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~

& 3KpS Yİ ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ ' 3KpS Yİ ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~

&kX 7URQJ P»W SK·QJ FKR $A_1, A_2, \dots, A_{10}$ ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ A_1, A_2, A_3, A_4 ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ QJ
KjQJ QJRjL UD NK{QJ Fy ÿLÇP QjR W ~~Ä~~ ~~Ä~~ ~~Ä~~ ~~Ä~~ JLiFQjY + ÓLQKy ÿm
WURQJ ÿLÇP WURQ"

\$ 116 WDP JLiF %80 WDP JLiF & 96 WDP JLiF' 60 WDP JLiF

&kX 7±S QJKLËP FëD E©W SKm̈kQJWUuQK

\$ S f %S R & S R ? ' S > f

&kX 1JKLĖP FëD SKmKQJ Wx[√]FQK x OYLQ

\$ x $\frac{S}{-}$ k S KR $\times$ F $\frac{S}{-}$ k $\frac{S}{-}$ k $\mathbb{Z}$.

%x $\frac{S}{-}$ k S KR $\times$ F $\frac{S}{-}$ k S k $\mathbb{Z}$.

&x $\frac{S}{-}$ k S KR $\times$ F $\frac{S}{-}$ k S k $\mathbb{Z}$.

' x $\frac{S}{-}$ k $\frac{S}{-}$ k $\mathbb{Z}$.

&kX 7tQKx 3x xL &KÑQ Njñw TXS

\$ F x - x x F R VC V L Q F x - x x F R VC V L Q

& F x - x x F R VC V L Q x - x x F R VC V L Q

&kX &y WKÇ FKLD PÝW NKÕL O±S SKmkQJ WKÇ QKt FëD E µQKL QK ÌX

ÿíQK FëD Wí GLĖQ FÊQJ Oj ÿíQK FëD KuQK O±S SKmkQJ"

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&kX 0ÝW F©S VÕ QKkQuFy VQ QJ Q J L y % Æ W 7 unP'

\$ n %n & n ' n

&kX x WKİ KuQK ErQ Oj FëD KJP VÕ QjR"

\$ y $\frac{x}{x}$

% y $\frac{x}{x}$

& y $\frac{x}{x}$

' y $\frac{x}{x}$

&kX &KR KJP VÕ x Fy ÿ×CW Kİ ÿ×PW Kİ x 6Õ JLDR jPLÇPj FëD

ÿ× VCKİOj

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&kX *Li WUİ QKÓ QKy©W FëW UkjQ>yFQj

\$ PLYQ @ % PLYQ $\frac{-}{@}$ & PLYQ @ ' PLYQ $\frac{-}{@}$

&kX 7uP W±S [iF ÿİQK FëD KJP VÕ $\frac{-}{x}$ Oj O Q

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&kX %LÃW Oj PÝW QJXlrQ KjfPxFeD-KÿF VÕ 7tQK

\$ F O Q%F O QF - ' F -

&kX &KR FSKABCD Fy ÿil\ Oj KuQKAABCDJ *yF JLóDSQmAjQB»W SK·QJ
SAD Oj JyF"

\$ CSA %CSD & CDS ' SCD

&kX .KDL WUlxÇQ a ax ax a x 7tQK WUaQJa a a

\$ S %S & S ' S

&kX &KAb! Yjabz ELÇXPWKRb bDRFy JLi WUİ EµQJ EDR QKLrX"

\$ % & '

&kX &KR KuQK FKyS 6 \$%&' Fy ÿia SAKABCD SA{QJ*FMQK Oj WUÑQ
WkP WDP'JLzItQK&WKÇ WtFK NKÖL FKyS * \$%&'

\$ -a %-a & -a ' -a

&kX &KR W±S KçS &y EDR QKLrX VÕ Wõ QKLrQ J×P FKó VÕ
O±S Wİ FiF FAK"ó VÕ WKXÝF

\$ % & '

&kX %LÃQ 3yÜLdx WKjQKdt YβL√x .KL fyty Oj KjP VÕ QjR WURQ

KjP VÕ VDX ÿk\"
\$ ft t t %ft t t &ft t t ' ft t t

&kX &KR Kjf xVÕOLrQ WéFjWU2Q 1S 3x. 7tQK WtFK3SxKkQ
x© x,1 x^{2f} x¹²

\$ I $\frac{1}{2}$ %I $\frac{5}{2}$ & I $\frac{3}{2}$ ' I $\frac{7}{2}$

&kX &KR KuQSAFCDyFy ABCD Oj KuQK WKDAQVjYB{Q%WÃYAD a
AB BC SA a &¥QKSAEYQ{QJ JyF YβL M»QJ WUXJQJAD.LÇPQKëD
NKRŠQJh FVFjÃQ P»WSSDK·QJ

\$ h $\frac{a}{}$ %h $\frac{a\sqrt{}}{}$ & h $\frac{a\sqrt{}}{}$ ' h $\frac{a\sqrt{}}{}$

&kX &KR PÝW F©S(u_n)VÕ FÿQJYj WUQJ VÕ K¥2850 ÿ«XtQKµQJ

S $\frac{1}{u_1u_2}$ $\frac{1}{u_2u_3}$... $\frac{1}{u_{49}u_{50}}$

\$ S 123 %S $\frac{4}{23}$ & S $\frac{9}{246}$ ' S $\frac{49}{246}$

&kX 7uP VÖa WÇ ðSKmkQJ WUuQKSK FKÍ Fy GW\ QK©W PÝW QJKLË
\$ a %a & a ' a

&kX &KR Kjp vÖ bx c Fy ÿ× WKİ QKm KuQK YÁ ErQ
0ËQK ÿÁ QjR GmQW ÿk\ Oj
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%a b c !
&a b c ! !
' a b c

&kX &KR SK«Q ,Y±WLMKÇYQ EãL FyLSK»WQSKWUjQK &³W SK«Q Y±W
WKÇ EãL P»W SK·QJ YX{QJ WYFL YyLLÇ WUéF KRjQdKW DÝmçF
WKLÃW GLËQ Oj PÝW WDP Jx√ ÿÁXtFyK ÿWKÇEVDK KÇEYQW W
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&kX &KR KuQK QyQ Fy7FQKÅKKËFDFDKÖL WUé Fy WKÇ WtFK OßC
KuQK QyQ WKHR
\$ x $\frac{h}{\sqrt{}}$ %x $\frac{h}{\sqrt{}}$ &x $\frac{h}{\sqrt{}}$ ' x $\frac{h}{\sqrt{}}$

&kX &KRb! QÖPa DRJ YjPa DRJ WKu JLabWEjQjD
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&kX &KR Kjp vÖ— H 9LÃW SKmkQJ WUuQK WLÃSHWXEÃQWVDLÿS
WX\ÃQ ÿy F³W WUéF KRjQK WUéFLVWQ JjOWQ DABçFK QWMLKDL
JÖF WÖD ÿÝ
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PmQ x "
\$ m %m &m ' m

&kX &KR NKÖLABEKySy jÖD Oj KuQK EuQK KjQK Yj FjLWKÇ WtFK
O«Q OmçW Oj ÿLÇFB, WKSX YFDRiFAFKQ KC=2ND SP PC 7tQK WKÇ
WtFKFëD NKÖMBEKyS
\$ V=14. %V=20. &V=28. ' V=40.

&kX &KR KuQK\$ABCySy ABC Oj WDP JLiF ÿÁX F¥QSABE DQJW D P»WLiF
FkQ W¥L 6 Yj QµP WURQJ P»W SK·QJtQK{QJKQFyDnKKÖR»W«S
QJR¥L WLÃS KuQK\$EKyS ÿm FKR ELÃW
\$ V √ S %V √ S &V S ' V √ S

&kX &KR KDL x\yõ WKKÓD PmYQ x yt *Li WUİ OßQ QK©W Yj JLi WU
 ELÇX PwKíF y x xy x O«Q OmçW EµQJ
 \$ P_{mD}[YP_{PLQ} %P_{mD}[YP_{PLQ}
 & P_{mD}[YP_{PLQ} ' P_{mD}[YP_{PLQ}

&kX &KRx Oj PÝW ÿD WKKÓD PmYQ KO LP $\frac{f x}{\sqrt{f x}}$
 \$ %l f &l ' l

&kX /±S SKmkQJ WUuQK WLÃS WX\ÃQy YßL ÿ× WWKİ Ó KDP
 f x x f x W¥L ÿLÇP Fx KRjQK ÿÝ
 \$ y -x - %y -x - &y -x - ' y -x -

&kX &KR Kjp vřOx $\frac{ax}{cx} \frac{b}{d}$ Fy ÿ× WKİ Kjp VÕ
 f x QKm WURQJ KuQK YÁ ErQ %LÃW UµQJ ÿ× WKİ Kjp
 VÕ x ÿL TXDAÿLÇP .K·QJ ÿİQK QjR
 GmßL ÿk-Qj

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&kX 7uP W©W Fß FiF JLi WUÿ vKřF vřD WKKD R VÕy ÿLÇP FõF W
 WKÓDxcPmxQ
 \$ m . % m . C. m . ' m .

&kX &KR Kjp vřOy ÿ¥R Kjp O R vKřF vřD PmYQx R %LÃW Yj
 $\frac{f x}{f x}$ x 7uP FiF JLi WUİ WkřÇ FßDm WKKD PmYQ KDL QJKLĚP
 WKõF SKkQ ELĚW
 \$ m!e % m d & m e ' m e

&kX 7uP ÿÇ Kjp = $\frac{(m+3)x+4}{x+m}$ QJKİFK ELÃQ(-WU) Q NKRßQJ
 \$ m ∈ (-4;1) %m ∈ [-4;1] & m ∈ (-4;-1] ' m ∈ (-4;-1)

&kX &KR KuQK WKKP EiQ NtQK{QJ ÿÙL 0ÝW KuQK YWİÉQF NtQKL ÅX P
 r WKD\ ÿÙL QÝL WLÃS KuQK WKKD R tQKRF GLÃQ WDK [XQJ TX
 WUé OßQ QK©W

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$$' \quad h \quad \frac{R\sqrt{2}}{2}$$

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