موسسه متروپل سعادت آباد

سعادت آباد – بلوار دریا – روبروی خیابان صرافها – پلاک 54 – **واحد** 10

METROPOLSAADATABAD

METROPOLSAADATABAD

02188562177-9

METROPOLSAADATABAD

A

ANKARA ÜNİVERSİTESİ

YABANCI UYRUKLU ÖĞRENCİ SINAVI (AYÖS)
TEMEL ÖĞRENME BECERİLERİ TESTİ
12 Mayıs 2019

ADAYIN ADI VE SOYADI *APPLICANT'S NAME SURNAME*	: .....
ADAY NO *APPLICANT'S NUMBER*	: .....
SALON NO *EXAMINATION ROOM NO*	: .....
SIRA NO *SEAT NUMBER*	: .....

Adınızı, soyadınızı, aday nonuzu ve sınav salon numaranızı yukarıda boş bırakılan yere yazınız.
Write your name, surname, candidate number, and examination hall no in the appropriate places above.

GENEL AÇIKLAMA
(GENERAL INSTRUCTIONS)

1. Bu sınavdaki soruların nasıl cevaplanacağı, testlerin başında açıklanmıştır. Soruları cevaplamaya başlamadan önce bu açıklamaları dikkatle okuyunuz.
2. Bu testlerdeki her sorunun bir tek doğru cevabı vardır. Bir soru için birden çok cevap yeri işaretlenmişse, o soru yanlış cevaplanmış sayılacaktır.
3. Cevaplarınızı koyu siyah ve yumuşak bir kurşun kalemle işaretleyiniz. İşaretlerinizi cevap yerinin dışına taşırmayınız. Tükenmez kalem veya dolma kalem kullanmayınız.
4. Cevap kâğıdınızı buruşturmayınız, katlamayınız ve üzerine gereksiz hiçbir işaret koymayınız.
5. Değiştirmek istediğiniz bir cevabı, yumuşak bir silgiyle, cevap kâğıdını örselemeden, temizce siliniz ve yeni cevabınızı işaretlemeyi unutmayınız.
6. Sınavda uyulacak diğer kurallar bu kitapçığın arka kapağında belirtilmiştir.

1. *The instructions for answering the questions appear at the beginning of the tests. Please read these carefully before beginning.*
2. *In these tests there is only one correct answer for each question. If more than one alternative is marked, that answer will automatically be considered wrong.*
3. *You should use a soft, black pencil to mark the answer sheet. Completely fill in the circle for the answer you have chosen, but make sure your mark does not exceed of the circle. Do not use any kind of pen.*
4. *Keep the answer sheet flat and do not fold it. Do not make any unnecessary marks on it.*
5. *If you wish to change an answer, carefully erase it completely with a soft eraser. Do not forget to mark your new answer.*
6. *The other regulations concerning the administration of the tests will be found at the back of the booklet.*

1.

$$x \oplus y \begin{cases} x = y & \Longrightarrow 3 \\ x > y & \Longrightarrow x + y + 3 \\ x < y & \Longrightarrow 2x - y \end{cases}$$

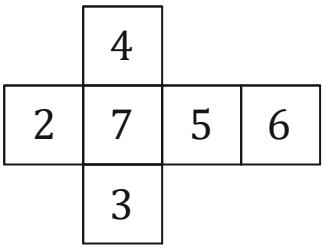
$$\big((a+1) \oplus a\big) \oplus (2a+5) = 7$$

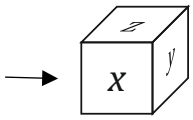
$a = ?$

$A)1 \quad B)2 \quad C)3 \quad D)4 \quad E)5$

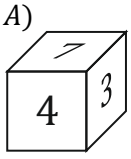
$2-7.$ sorularında açık hali verilen küpün kapalı halini bulunuz

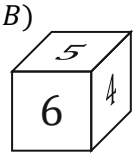
2.

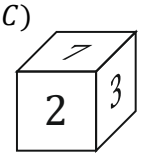


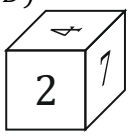


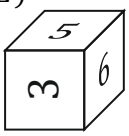
$x = ?$
$y = ?$
$z = ?$

$A)$ 

$B)$ 

$C)$ 

$D)$ 

$E)$ 

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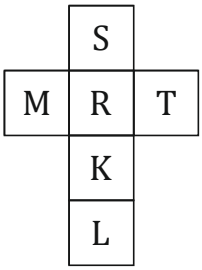
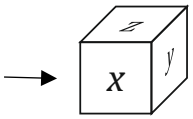
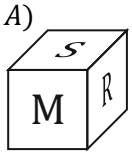
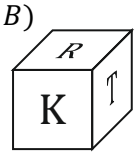
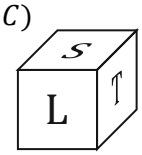


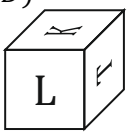


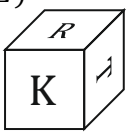
$x = ?$
$y = ?$
$z = ?$

$A)$ 

$B)$ 

$C)$ 

$D)$ 

$E)$ 

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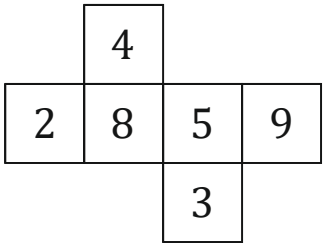
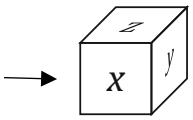
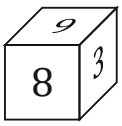
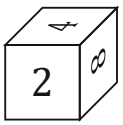
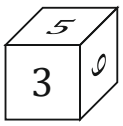


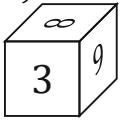


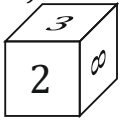
$x = ?$
$y = ?$
$z = ?$

$A)$ 

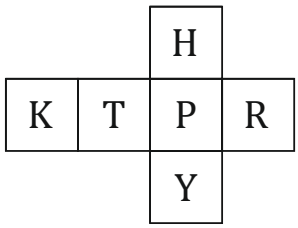
$B)$ 

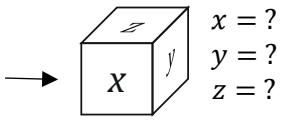
$C)$ 

$D)$ 

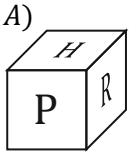
$E)$ 

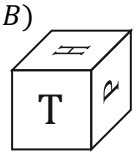
5.

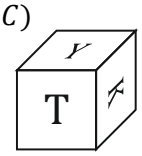


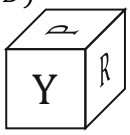


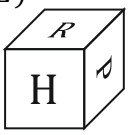
$x = ?$
$y = ?$
$z = ?$

$A)$ 

$B)$ 

$C)$ 

$D)$ 

$E)$ 

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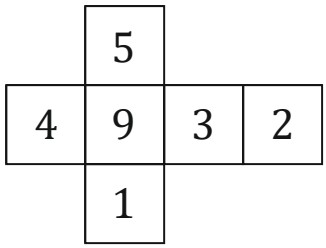
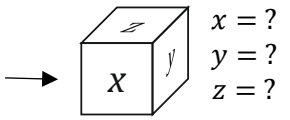
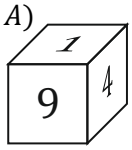
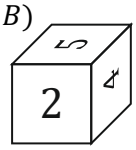
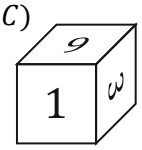


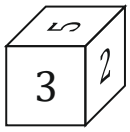


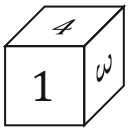
$x = ?$
$y = ?$
$z = ?$

$A)$ 

$B)$ 

$C)$ 

$D)$ 

$E)$ 

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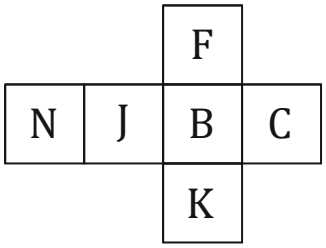
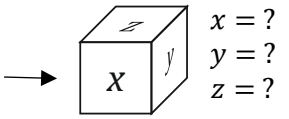
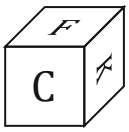
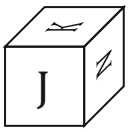
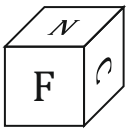


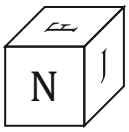


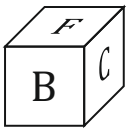
$x = ?$
$y = ?$
$z = ?$

$A)$ 

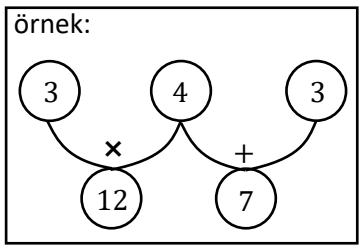
$B)$ 

$C)$ 

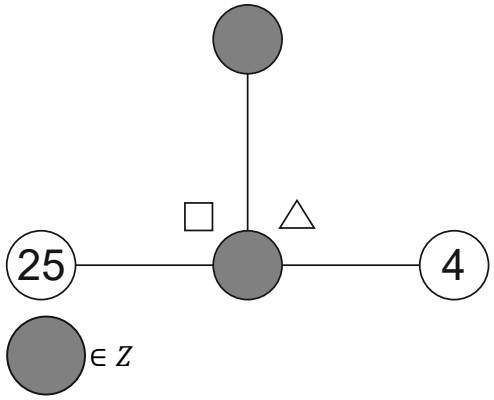
$D)$ 

$E)$ 

8 – 9. sorularını aşağıdaki örneğe göre çözünüz



8.

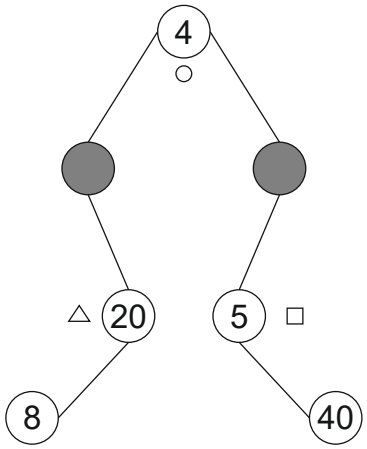


$(\triangle, \square) = ?$

$A)(\div,\times)$ $B)(+,-)$ $C)(+,\div)$

$D)(\times,\div)$ $E)(-,+)$

9.



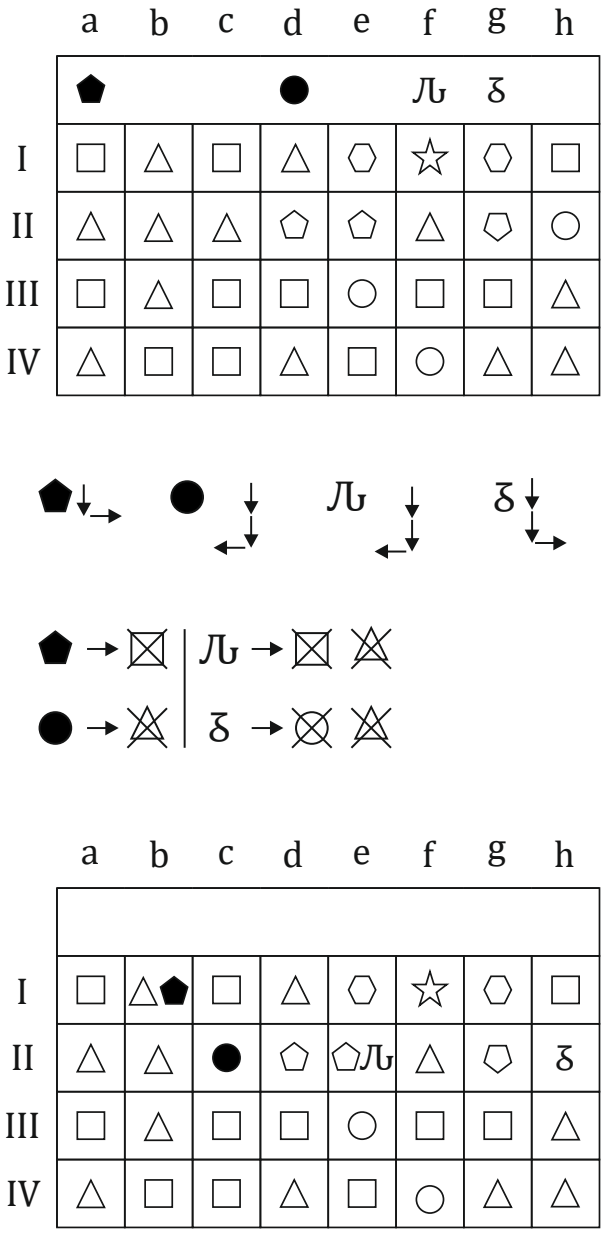
$\circ\ \triangle\ \square = ?$

$A)-\times-$ $B)-+\div$ $C)+-\div$

$D)-\div+$ $E)-\times\div$

10 – 12. sourularını aşağıdaki verilen örneğe göre çözünüz

Örnek:

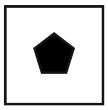


	a	b	c	d	e	f	g	h
	⬟			●		Ⱡ	ȝ	
I	□	□	□	○	△	○	○	△
II	○	□	△	○	□	△	○	△
III	△	△	⬡	⬡	⬠	○	⬠	□
IV	△	□	○	⬠	⬠	△	□	⬠
V	☆	⬠	△	□	□	○	△	□
VI	⬡	⬠	□	○	□	☆	□	☆

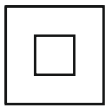
10.

Ib = ?

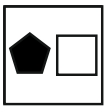
A)



B)



C)



D)

E)

11.

IIIe = ?

A)

B)

C)

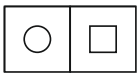
D)

E)

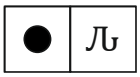
12.

II d , I e = ?

A)

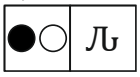


B)

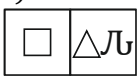


C)

D)



E)



13.

$\frac{11}{4}-\left(\frac{5}{6}+\frac{5}{3}\right)=?$

$A)\frac{1}{2}$ $B)\frac{1}{5}$ $C)\frac{2}{5}$ $D)\frac{1}{4}$ $E)\frac{3}{2}$

14.

$\frac{x}{2}=\frac{y}{6}=\frac{9}{y-x}$

$\Longrightarrow x+y=?$

$A)2$ $B)6$ $C)9$ $D)12$ $E)15$

15.

$\frac{x^2-4}{2x^2-3x+1}\cdot\frac{4x^2-4x+1}{2x^2+3x-2}=\frac{4}{5}$

$\Longrightarrow x=?$

$A)2$ $B)4$ $C)5$ $D)6$ $E)8$

16.

$x+2y-z=7$

$3x+2y+z=13$

$3x+3y+z=18$

$\Longrightarrow x+y+z=?$

$A)2$ $B)6$ $C)8$ $D)9$ $E)10$

17.

$\frac{\sqrt{3}}{\sqrt{12}}+\frac{1}{\sqrt{3}+1}=?$

$A)\frac{\sqrt{2}}{3}$ $B)\frac{\sqrt{3}}{2}$ $C)\frac{\sqrt{3}}{4}$ $D)\frac{1}{\sqrt{3}}$ $E)1$

18.

$2\leq\frac{3a+5}{7}\leq 5$

$\Longrightarrow \max(a)+\min(a)=?$

$A)11$ $B)12$ $C)13$ $D)14$ $E)15$

19.

$a=\frac{1}{2}, b=4$

$\Longrightarrow 8a^2-12a^2b+6ab^2-b^2=?$

$A)4$ $B)8$ $C)16$ $D)22$ $E)30$

20.

$8\cdot 2^7+5\cdot 2^6-7\cdot 2^6=(?)_2$

$A)1030000000$ $B)1110000000$

$C)111000000$ $D)1010000000$

$E)1010100000$

21.

$a_1 = 2^8$

$a_n = a_{n+1} \cdot r \quad (n \geq 1)$

$r = \frac{3}{2}$

$a_7 = ?$

$A)\frac{2^{12}}{3^4} \quad B)6^{14} \quad C)\frac{2^{14}}{3^6} \quad D)\frac{2^{14}}{3^7} \quad E)\frac{2^{12}}{3^6}$

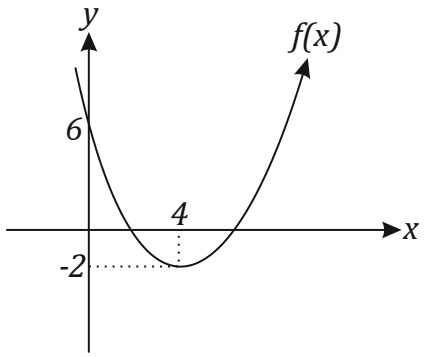
22.

$\sqrt{x} - \sqrt{y} = \sqrt{x + y - 3}$

$\Longrightarrow x \cdot y = ?$

$A)\frac{3}{2} \quad B)\frac{9}{4} \quad C)\frac{7}{5} \quad D)\frac{27}{8} \quad E)\frac{21}{4}$

23.



$f(x) = ax^2 + bx + c$

$\Longrightarrow a \cdot b \cdot c = ?$

$A)12 \quad B)-3 \quad C)4 \quad D)3 \quad E)6$

24.

$f(x) = 2x^2 - kx + 8$

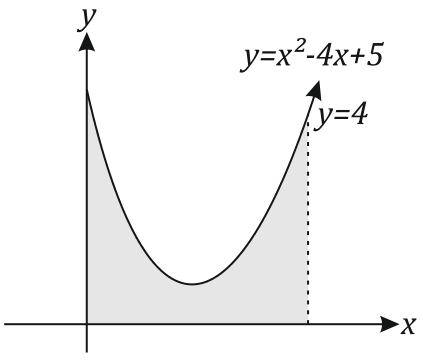
$2x_1 - \frac{3}{x_2} = 1$

$f(x_1) = f(x_2)$

$\Longrightarrow k = ?$

$A)\frac{28}{3} \quad B)\frac{56}{3} \quad C)\frac{58}{5} \quad D)\frac{64}{5} \quad E)11$

25.



Taralı alan $= ?\ br^2$

$A)32 \quad B)18\sqrt{3} - 18 \quad C)18\sqrt{3} - 24$

$D)9\sqrt{3} - 18 \quad E)9\sqrt{3} - 12$

26.

$A = \{1,2,3,5\}$

$B = \{x|\ \ x = a + b\ ,\ \ a \neq b\ ,\ \ a, b \in A\}$

$n(B) = ?$

$A)2 \quad B)4 \quad C)5 \quad D)6 \quad E)7$

27.

$a_n = \sum_{k=1}^{n} \log 2^{-k}$

$\Longrightarrow a_4 - a_2 = ?$

$A) \log 2 \quad B) -14 \log 2 \quad C) 7 \log 2$

$D) -7 \log 2 \quad E) -5 \log 2$

28.

$P(x) = 3x^3 - x^2 + 3x - 1$

$P(x) = Q(x) \cdot x^2 + R(x)$

$P(1) + R(0) = ?$

$A)2 \quad B)3 \quad C)4 \quad D)5 \quad E)6$

29.

$\log 2 = 4$

$\Longrightarrow \log_2 5 = ?$

$A) -\frac{1}{2} \quad B) \frac{3}{4} \quad C) \frac{-2}{3} \quad D) \frac{-3}{4} \quad E) \frac{1}{2}$

30.

$\arctan x = \arctan 2x$

$\Longrightarrow x = ?$

$A) \frac{4\pi}{9} \quad B) \frac{2\pi}{5} \quad C) \frac{\pi}{5} \quad D) \frac{3\pi}{7} \quad E)0$

31.

$fog(x) = 3x + 4$

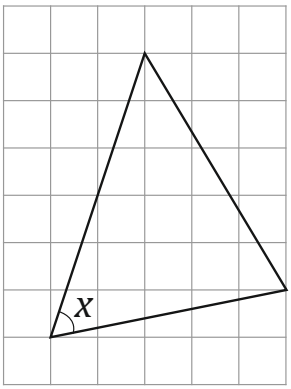
$(f + g)(x) = 2x - 3$

$f(5) = 4$

$f(3) = ?$

$A)11 \quad B)13 \quad C)17 \quad D)19 \quad E)21$

32.



$\tan(x) = ?$

$A) \frac{14}{3} \quad B) \frac{15}{2} \quad C) \frac{15}{7} \quad D) \frac{21}{2} \quad E) \frac{13}{3}$

33.

$(2 + i)^2 \cdot (3 - 4i) = ?$

$A)21 \quad B)25 \quad C)9 - 16i$

$D)9 + 16i \quad E)21 - 16i$

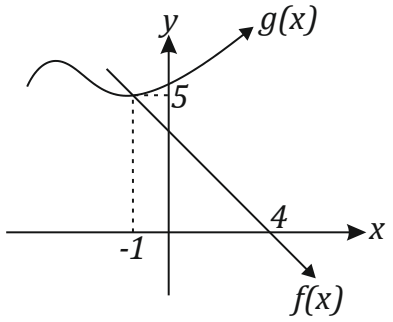
34.

$$\lim_{x\to\pi}\frac{x^2+\cos x}{x^3+\cos(\pi-x)}=?$$

$A)\frac{\pi^2+1}{\pi^3+\pi^2+1}$ $B)\frac{\pi+1}{\pi^2+1}$ $C)\frac{\pi+1}{\pi^2+\pi+1}$

$D)\frac{\pi^2+\pi+1}{\pi+1}$ $E)\frac{\pi+1}{\pi^2-\pi+1}$

35.



$g(3x)=f(x+1)\cdot x^2$

$g'(-6)=?$

$A)-\frac{3}{2}$ $B)\frac{-26}{3}$ $C)-20$

$D)-\frac{4}{5}$ $E)-21$

36.

$$f(x)=\begin{cases} x<2, & f(x)=3 \\ 2<x\le 4, & f(x)=x \\ x\ge 4, & f(x)=-3 \end{cases}$$

$$\Rightarrow\int_{-1}^{7}f(x)=?$$

$A)5$ $B)3$ $C)4$ $D)6$ $E)7$

37.

$$\int_0^1 x\left(2-\sqrt{x}\right)dx=?$$

$A)1$ $B)0$ $C)\frac{2}{5}$ $D)\frac{3}{5}$ $E)\frac{3}{4}$

38.

$$\frac{dy}{dx}=\frac{2}{\sqrt{x}}$$

$$\Rightarrow\left.\frac{d^2y}{dx^2}\right|_{x=4}=?$$

$A)\frac{-1}{4}$ $B)\frac{1}{2}$ $C)\frac{1}{8}$ $D)\frac{-1}{8}$ $E)\frac{1}{4}$

39.

$f(x)=ax^3+bx^2+c$

$f'(-1)=f''(0)=4$

$\Rightarrow a+b=?$

$A)4$ $B)3$ $C)\frac{14}{3}$ $D)\frac{7}{3}$ $E)\frac{13}{2}$

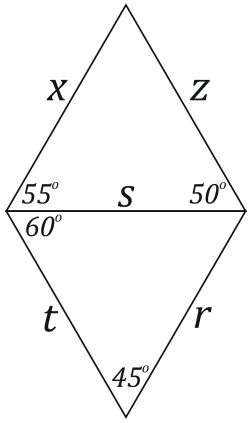
40.

$f\left(\frac{x+1}{2}\right) = 2x^3 + x + 5$

$f'(2) = ?$

$A)105 \quad B)110 \quad C)100 \quad D)55 \quad E)60$

41.



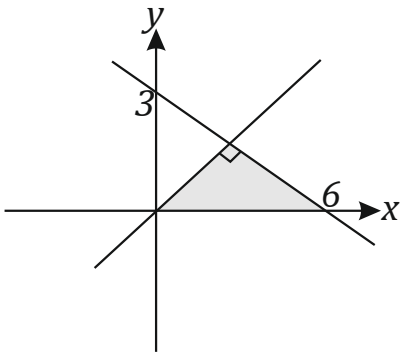
$? < ? < ? < ? < ?$

$A)s < x < z < r < t \quad B)x < z < s < r < t$

$C)r < x < s < t < r \quad D)z < x < t < r < s$

$E)s < x < z < r < t$

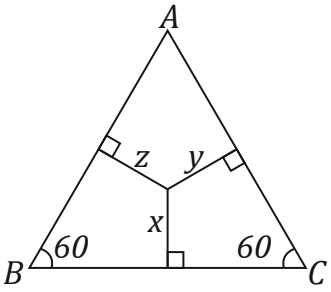
42.



Taralı Alan $= ?\, br^2$

$A)\frac{36}{5} \quad B)\frac{72}{5} \quad C)\frac{18}{7} \quad D)\frac{55}{6} \quad E)\frac{27}{4}$

43.

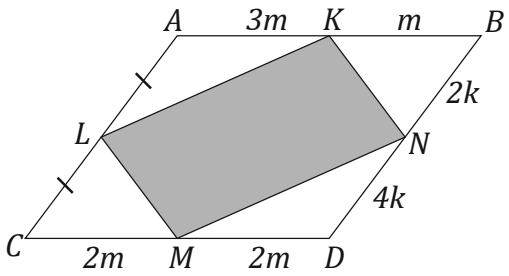


$|BC| = 2y$

$x + y + z = ?$

$A)y \quad B)\frac{2y}{\sqrt{3}} \quad C)2y\sqrt{3} \quad D)y\sqrt{3} \quad E)\frac{y\sqrt{3}}{2}$

44.



$ABCD$ paralel kenardır

$\frac{A(KLMN)}{A(ABCD)} = ?$

$A)\frac{1}{3}$ $B)\frac{2}{3}$ $C)\frac{1}{2}$ $D)\frac{1}{4}$ $E)\frac{1}{8}$

45.

d_1: $ax^2 - 2y + 4 = 0$

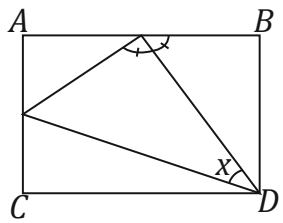
d_2: $3x^2 + 4y + 12 = 0$

$d_1 /\!/ d_2$

$\Rightarrow |d_1 d_2| = ?$

$A)5$ $B)4$ $C)\frac{20}{3}$ $D)\frac{10\sqrt{6}}{3}$ $E)2\sqrt{3}$

46. *



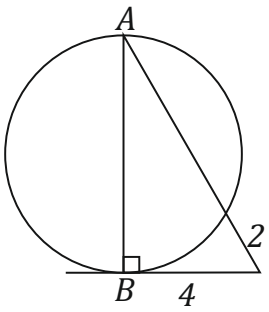
$ABCD$ kare

… … …

$\Rightarrow x = ?°$

$A)$ $B)$ $C)$ $D)$ $E)$

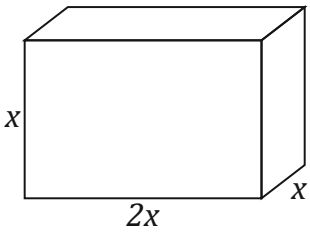
47.



$|AB| = ?$

$A)2\sqrt{3}$ $B)4\sqrt{2}$ $C)3\sqrt{2}$ $D)4\sqrt{3}$ $E)8\sqrt{3}$

48.



$Alan = 40$

$V = ?$

$A)12$ $B)16$ $C)8$ $D)24$ $E)32$

1. B
2. D
3. E
4. C
5. A
6. C
7. E
8. D
9. B
10. A
11. C
12. D
13. D
14. D
15. D
16. C
17. A
18. C
19. D
20. B
21. C
22. B
23. D
24. C
25. C
26. D
27. D
28. B
29. D
30. E
31. D
32. B
33. B
34. C
35. B
36. D
37. D
38. D
39. C
40. B
41. B
42. B
43. D
44. C
45. B
46. –
47. D
48. B