Deneme Sınavı
Trial Exam

7

ÇÖZÜMLER

TAMAMI VİDEO ÇÖZÜMLÜ

VİDEO ÇÖZÜM UYGULAMASI İÇİN

1. DAYI AYIP YARI SIRA ASIR

5346 3468 3762 7623 3762

A = 3

7323 S = 7 6 = I 2 = R YARI 4326

SIRA 326

Cevap: A

2. EKRAN KARNE MERAK AKRAN KENAR

16452 32461 21465 12564 65465

K = 1

32461 = MERAK

Cevap: B

3. 325 234 251 514 342

△ = 2

342 = □▽△

Cevap: E

4. 1543 4312 3451 3242 5234

□ = 3

△○■□ = 1543

○▽□■ = 5234

Cevap: E

5. $\frac{1}{a} \clubsuit (b+3) = 2a - 3b$

$2 \clubsuit 5 = ?$

$a = \frac{1}{2}$ $b = 2$ $2.\frac{1}{2} - 3.2 = 1 - 6 = -5$

Cevap: B

6. $2 < 3$

$2 \oplus 3 = 2.3 - 2 = 4$

$4 > 2$ $4 \oplus 2 = 2^4 + 2 = 16 + 2 = 18$

Cevap: C

7. $9 \bigstar 4 = \sqrt{9.4} = \sqrt{36} = 6$

$6 \triangle 2 = 6 - 2.2 + 3 = 6 - 4 + 3 = 5$

Cevap: A

8. $3 \square 2 = 2^3 - 3^2 = 8 - 9 = -1$

$-1 \otimes 2 = (-1)^{-1} + (-2)^2 = -1 + 4 = 3$

$-1 \otimes 3 = (-1)^{-1} + (-2)^3 = -1 - 8 = -9$

Cevap: B

Diğer Sayfaya Geçiniz.

9. $a + b = 23$

$a + c = 3b$

$c + c = 10 \quad \boxed{c = 5}$

$a = 3b - 5 \qquad 3b - 5 + b = 23$

$4b = 28$

$\boxed{b = 7}$

Cevap: C

10. $a.b = 3c$

$b.c = 4a \Rightarrow a^{\not 2}.b^{\not 2}.c^{\not 2} = 3.4.6.\not a.\not b.\not c$

$a.c = 6b$

$\underbrace{a.b}_{4a}.c = 72 \qquad \underbrace{a.b}_{3c}.c = 72 \qquad \underbrace{a.b}_{6b}.c = 72$

$4a^2 = 72 \qquad 3c^2 = 72 \qquad 6b^2 = 72$

$a^2 = 18 \qquad c^2 = 24 \qquad b^2 = 12$

Cevap: B

11. $\not a.b = 12\not a \rightarrow b = 12$

$b.c = 4a \rightarrow 12.c = 4a \rightarrow c = \frac{a}{3}$

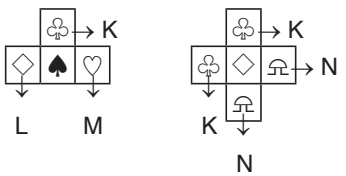
$a+c = 4b \rightarrow a+c = 48$

$a + \frac{a}{3} = 48$

$\frac{4a}{3} = 48 \quad a = 36$

Cevap: E

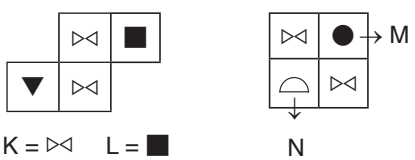
12.



$K = \clubsuit \quad L = \diamondsuit \quad M = \heartsuit \quad N = \text{卐}$

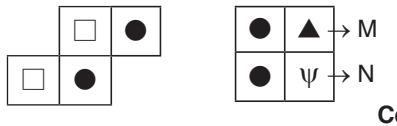
Cevap: B

13.



Cevap: D

14.



Cevap: C

15. $a + b = 8$

$b = 2 \qquad a = 6$

$a.c = 18 \qquad c = 3$

$d^b = 49 \qquad d^2 = 49 \qquad d = 7$

$K = c + d = 3 + 7 = 10$

Cevap: A

16. $a + b = 3$

$c = 5 \qquad K = c^a$

$c + d = 11 \qquad L = d^b$

$b.d = 12$

$c = 5 \quad d = 6 \quad b = 2 \quad a = 1 \quad K = 5 \quad L = 36$

$K + L = 5 + 36 = 41$

Cevap: C

17. $c^a = c^3 \qquad \boxed{a = 3}$

$d^b = b^{14}$

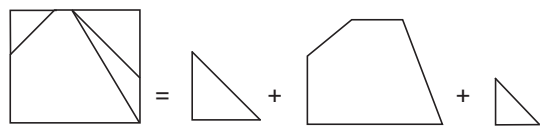
$b.d = b^8 \rightarrow d = b^7$

$(b^7)^b = b^{14} \qquad 7b = 14 \qquad \boxed{b = 2}$

$K = a + b = 3 + 2 = 5$

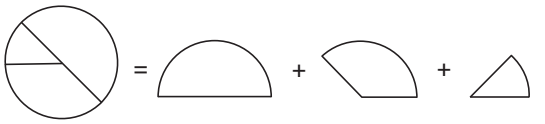
Cevap: A

18.



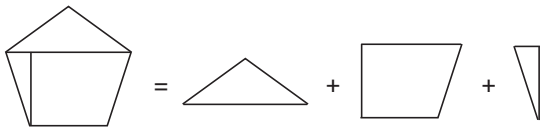
Cevap: E

19.



Cevap: C

20.



Cevap: D

21. ● + △ = 4□ 3□ + △ = ?

− ● + □ = 2△

△ − □ = 4□ − 2△

3△ = 5□

△ = 5k

□ = 3k 3□ + △ = 9k + 5k = 14k = 2●

● = 7k

Cevap: B

22. 2△ + □ = 2.○ + △ △ + □ = 2. ○

2.○ + □ = 5△ 2. ○ + □ = 5△

2□ = ? △ + 2□ = 5△

2□ = 4△

□ = 2△

△ = 2k

□ = 4k

○ = 3k 2□ = 8k

2.○ + △ = 8k

Cevap: A

23. 2⬡ + ● = 2□

2□ = 5●

2⬡ + ● = 5●

2⬡ = 4●

⬡ = 2.● ⬡ + 3● = 4k + 6k = 10k = 2□

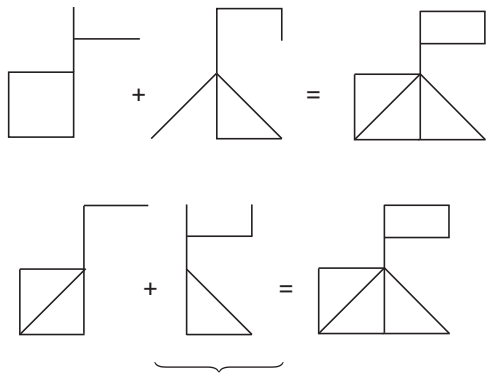
● = 2k

⬡ = 4k

□ = 5k

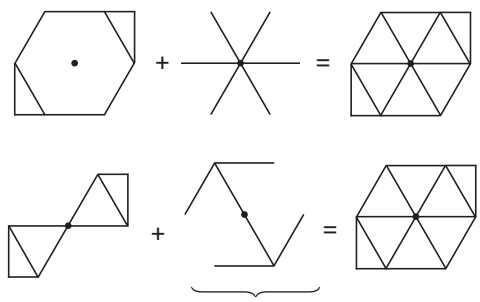
Cevap: D

24.



Cevap: E

25.

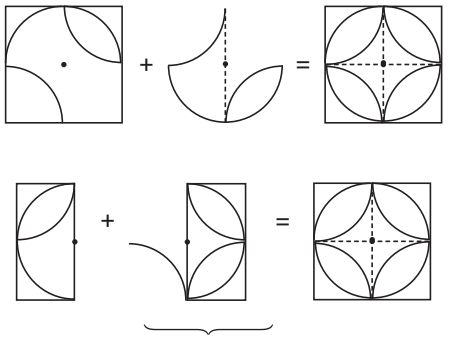


Cevap: B

TASARI EĞİTİM YAYINLARI

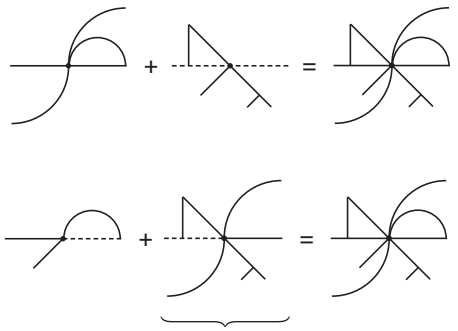
Diğer Sayfaya Geçiniz.

26.



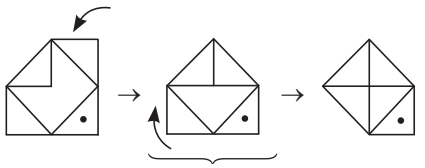
Cevap: C

27.



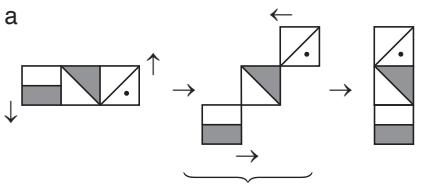
Cevap: B

28.



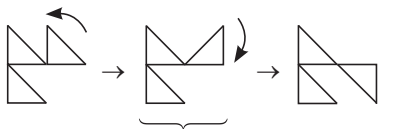
Cevap: A

29. a



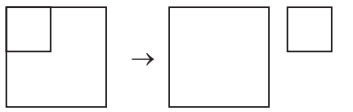
Cevap: C

30.

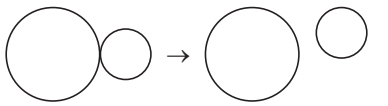


Cevap: D

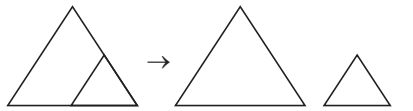
31. A)



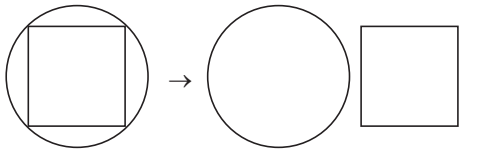
B)



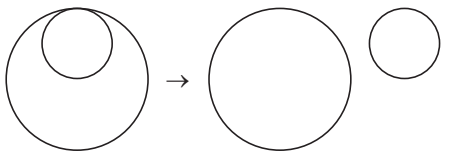
C)



D)

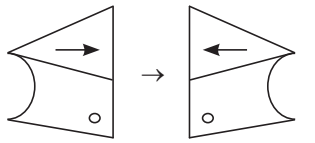


E)



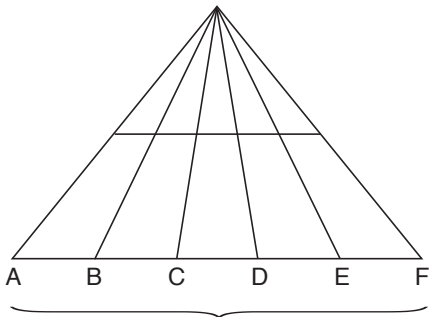
Cevap: D

32.



Cevap: E

33.



$\binom{6}{2}.2 = 15.2 = 30$

Cevap: C

34.
2 + 3 = 5
5 + 1 = 6
6 + 0 = 6

6 + 3 = 9
9 + 1 = 10
10 + 0 = 10

10 + 3 = 13
13 + 1 = 14 ← ? = 13
14 + 0 = 14

Cevap: D

35.
1 + 2 = 3
3.2 = 6
6 + 1 = 7

7 + 2 = 9
9.2 = 18
18 + 1 = 19

19 + 2 = 21
21.2 = 42 ← ? = 42
42 + 1 = 43

Cevap: B

36. KURDELAM = 76205314

K = 7 U = 6 R = 2 D = 0 E = 5

L = 3 A = 1 M = 4

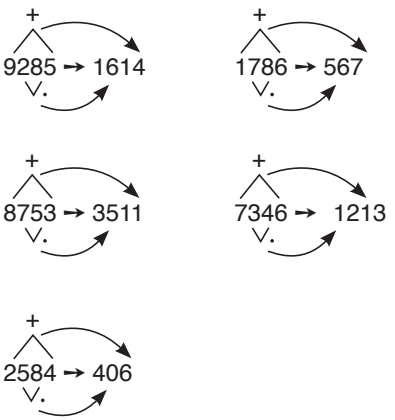
5673310241 = EUKLLADRMA

Cevap: D

37.
1 + 1 + 2 = 4 — 4.3 = 12
1 + 1 + 2 + 3 = 7 — 7.4 = 28
1 + 1 + 2 + 3 + 5 = 12 — 12.5 = 60
1 + 1 + 2 + 3 + 5 + 8 = 20 — 20.6 = 120

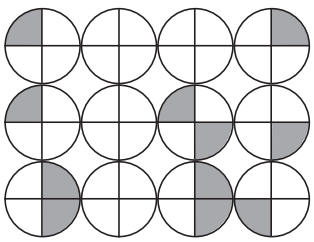
Cevap: E

38.



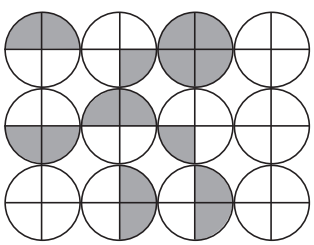
Cevap: D

39.



= 48
= 11
37

$\frac{37}{48}$

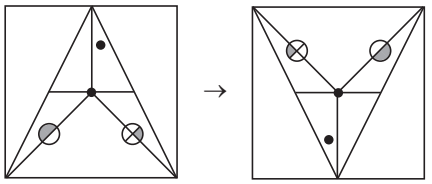


= 48
= 16
32

$\frac{32}{48} = \frac{2}{3}$

Cevap: A

Diğer Sayfaya Geçiniz.

40. 

Cevap: C

41. $5 + 3 = 8$
$8 - 4 = 4$
$4 + 3 = 7$
$7 - 4 = 3$
$3 + 3 = 6$
$6 - 4 = 2$
$2 + 3 = 5$
$5 - 4 = 1 \leftarrow ? = 1$

Cevap: D

42. $y = 2x - 2 \qquad x = 4 \Rightarrow y = 6$
$z = 2x + 2 \qquad x = 4 \Rightarrow z = 10$
$y + z = 16$

Cevap: E

43. $3^2 + 5 = 14$
$2^2 + 3 = 7$
$1^2 + 4 = 5$
$2^2 + 5 = 9$

Cevap: B

44. $3 + 2 = 5$
$5 + 4 = 9$
$9 + 6 = 15$
$15 + 8 = 23$
$23 + 10 = 33 \Rightarrow ? = 33$

Cevap: D

45. $22 \diamondsuit 12 \Rightarrow 2 + 2 = 4$
$1 + 2 = 3$
$4.3 = 12$
$24 \diamondsuit 15 \Rightarrow 2 + 4 = 6$
$1 + 5 = 6$
$6.6 = 36$
$67 \diamondsuit 16 \Rightarrow 6 + 7 = 13$
$1 + 6 = 7$
$13.7 = 91 \Rightarrow ? = 91$

Cevap: D

46. $\frac{1}{5} - 2:\frac{2+\frac{1}{2}}{2-\frac{1}{2}} = \frac{1}{5} - 2:\frac{\frac{5}{2}}{\frac{3}{2}} = \frac{1}{5} - 2:\frac{5}{3}$

$= \frac{1}{5} - 2.\frac{3}{5} = \frac{1}{5} - \frac{6}{5} = -1$

Cevap: B

47. $\left(1-\frac{1}{4}\right).\left(1-\frac{1}{9}\right)\left(1-\frac{1}{16}\right)...\left(1-\frac{1}{64}\right)$

$= \left(1-\frac{1}{2}\right).\left(1+\frac{1}{2}\right).\left(1-\frac{1}{3}\right).\left(1+\frac{1}{3}\right)...\left(1-\frac{1}{8}\right).\left(1+\frac{1}{8}\right)$

$= \frac{1}{2}.\frac{2}{3}...\frac{7}{8}.\frac{3}{2}.\frac{4}{3}...\frac{9}{8} = \frac{1}{8}.\frac{9}{2} = \frac{9}{16}$

Cevap: A

48. $\frac{12.10^{-11} + 28.10^{-11}}{2.10^{-12}} = \frac{\overset{20}{\cancel{40}}.10^{-11}}{\cancel{2}.10^{-12}} = 20.10 = 200$

Cevap: E

49. $\left[\left(-\frac{1}{27}\right)^{-\frac{1}{3}}\right]^2 = \left((-27)^{\frac{1}{3}}\right)^2 = \left(((-3)^3)^{\frac{1}{3}}\right)^2$

$= (-3)^2 = 9$

Cevap: C

50. $\frac{2^{200}.(2-1)}{2^{200}} = 1$

Cevap: A

51. $\sqrt{\frac{3.12^x}{3^x.3}} = 16 \rightarrow \sqrt{4^x} = 16 \rightarrow 4^x = 16^2$

$2^{2x} = 2^8$

$\boxed{x = 4}$

Cevap: D

52. $\frac{0,49}{0,07} - \frac{0,36}{0,012} + \frac{1,2}{0,12} = \frac{49}{7} - \frac{360}{12} + \frac{120}{12}$

$= 7 - 30 + 10$

$= -13$

Cevap: B

53. $\frac{\frac{1}{a^2} - 1}{\frac{1}{a} + 1} \cdot \frac{a^2}{a-1} = \frac{\frac{1-a^2}{a^2}}{\frac{1+a}{a}} \cdot \frac{a^2}{a-1}$

$= \frac{(1-a)(1+a)}{a^2} \cdot \frac{a}{1+a} \cdot \frac{a^2}{a-1} = -a$

Cevap: D

54. $x + y = 8$

$\frac{x^2 - 4x + 4 - y^2}{(x-y)(x+y) - 2.(x+y)} = \frac{(x-2)^2 - y^2}{(x+y)(x-y-2)}$

$= \frac{(x-2-y)(x-2+y)}{(x+y).(x-y-2)}$

$= \frac{x+y-2}{x+y} = \frac{8-2}{8}$

$= \frac{6}{8} = \frac{3}{4}$

Cevap: B

55. $\frac{a}{b} = \frac{c}{d} = \frac{e}{f} = \frac{2}{3}$

$\frac{2a}{2b} = \frac{-c}{-d} = \frac{e}{f} = \frac{2}{3} \Rightarrow \frac{\overset{12}{\boxed{2a - c + e}}}{2b - d + f} = \frac{2}{3}$

$\Rightarrow \frac{12}{2b - d + f} = \frac{2}{3}$

$\frac{\overset{6}{12}}{8 - d} = \frac{2}{3}$ $\quad 8 - d = 18$ $\quad \boxed{d = -10}$

Cevap: A

56. $x^3 - 2x^2 + 4x + k = (x^2 + 4).B(x)$

$x^2 = -4 \Rightarrow x^2.x - 2.x^2 + 4x + k = 0$

$-4x + 8 + 4x + k = 0$

$k = -8$

Cevap: B

57. $\log_8 25. \log_{125} 16 = \log_{2^3} 5^2 . \log_{5^3} 2^4$

$= \frac{2}{3} . \log_2 5 . \frac{4}{3} . \log_5 2$

$= \frac{8}{9} . \log_2 5 . \log_5 2$

$= \frac{8}{9}$

Cevap: C

58. $\log_4(x+2) = \log_2 x$

$\log_4(x+2) = \log_4 x^2$

$x + 2 = x^2$

$0 = x^2 - x - 2$

$0 = (x-2)(x+1)$

$x = 2 \quad x = -1$

$x \neq -1$ $\quad \boxed{x = 2}$

Cevap: C

Diğer Sayfaya Geçiniz.

59. $f\left(x+\frac{1}{x}\right)=\underbrace{x^2+\frac{1}{x^2}}-3$

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

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

$f(3)=3^2-5=4$

Cevap: E

60. $\lim_{x\to 0}\frac{x.e^{\sin x}}{\sin 3x}=\frac{0}{0}$

$\Rightarrow \lim_{x\to 0}\frac{1.e^{\sin x}+e^{\sin x}.\cos x.x}{\cos 3x.3}=\frac{e^0+0}{1.3}=\frac{1}{3}$

Cevap: C

61. $\lim_{x\to -\infty}\frac{2^{x+1}-3^x}{2^x+3^x}=\lim_{x\to 0}\frac{2^x.2-3^x}{1.2^x+3^x}=2$

Cevap: D

62. $\lim_{x\to 3}\frac{1}{\ln(x-2)}-\frac{1}{x-3}=\lim_{x\to 3}\frac{x-3-\ln(x-2)}{(x-3).\ln(x-2)}$

$=\frac{0}{0}$

$\lim_{x\to 3}\frac{1-\frac{1}{x-2}}{1.\ln(x-2)+\frac{1}{x-2}.(x-3)}$

$=\lim_{x\to 3}\frac{\frac{x-3}{x-2}}{\frac{(x-2).\ln(x-2)+(x-3)}{x-2}}=\frac{0}{0}$

$\Rightarrow \lim_{x\to 3}\frac{1}{\ln(x-2)+\frac{1}{x-2}.(x-2)+1}$

$=\frac{1}{0+1+1}=\frac{1}{2}$

Cevap: E

63. $f(x)=x^2-x.\cos x$

$f'(x)=2x-(1.\cos x+-\sin x.x)$

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

Cevap: B

64. $f(x)=e^{\ln(x^2-\ln 3x)}=x^2-\ln 3x$

$f'(x)=2.x-\frac{3}{3x}$

$f'(1)=2-1=1$

Cevap: B

65. $f(x)=\frac{g(3x)}{x^2-2}$

$f'(x)=\frac{g'(3x).3.(x^2-2)-2x.g(3x)}{(x^2-2)^2}$

$f'(1)=\frac{g'(3).3.(-1)-2.g(3)}{(-1)^2}=\frac{-9+4}{1}=-5$

Cevap: A

66. $f(x)=\tan(\sin 2x)$

$f'(x)=(1+\tan^2(\sin 2x)).\cos 2x.2$

$f'(0)=(1+\underbrace{\tan^2.0}_{0}).\cos 0.2$

$f'(0)=1.1.2=2$

Cevap: E

67. $\int\frac{4\ln^3 x}{x}dx \Rightarrow \ln x=t$

$\frac{1}{x}dx=dt$

$\int 4t^3dt=t^4+c$

$=(\ln x)^4+c$

Cevap: B

68. $\int(x-1).e^x dx \Rightarrow (x-1).e^x-\int e^x dx$

$x-1=u \quad e^x dx=dv$ $\quad =(x-1).e^x-e^x+c$

$dx=du \quad e^x=v$ $\quad =x.e^x-e^x-e^x+c$

$=e^x(x-2)+c$

Cevap: D

69.

$\frac{2012}{4}$ $\frac{2013}{4+x}$ $\frac{2014}{4+2x}$ $\frac{2015}{4+3x}$ $\frac{2016}{4+4x}$ $\frac{2017}{4+5x}$ $\frac{2018}{4+6x}$ $\frac{2019}{4+7x}$ $\frac{2020}{4+8x}$

$4 + 8x = 20$

$8x = 20 - 4$

$8x = 16$

$x = 2$

2015 yılında $4 + 3x = 4 + 3.2 = 4 + 6 = 10$ milyon

Cevap: C

70. $z = \frac{\sqrt{3}}{2} - \frac{1}{2}i \qquad |z| = \sqrt{\frac{3}{4} + \frac{1}{4}} = 1$

$$\tan\theta = \frac{-\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{-1}{\sqrt{3}}$$

$\theta = 330°$

$z = \cos330 + i\sin 330$

$z^{10} = \cos3300 + i\sin3300$

$= \cos60 + i\sin60$

$= \frac{1}{2} + \frac{\sqrt{3}}{2}i$

Cevap: A

71. $z = \underset{(3-i)}{\frac{3-i}{3+i}} + \underset{(2+i)}{\frac{1}{2-i}}$

$$\frac{(3-i)^2}{10} + \frac{2+i}{5} = \frac{9-6i+i^2}{10} + \frac{4+2i}{10} = \frac{12-4i}{10}$$

$$\underset{(2)}{} = \frac{6}{5} - \frac{2}{5}i$$

$$Re(z) = \frac{6}{5}$$

Cevap: E

72. $(\sin x - \cos x)^2 = \left(\frac{1}{3}\right)^2$

$\sin^2x - 2\sin x\cos x + \cos^2x = \frac{1}{9}$

$1 - 2\sin x\cos x = \frac{1}{9}$

$1 - \sin2x = \frac{1}{9}$

$\frac{8}{9} = \sin2x$

Cevap: C

73. Bir tel $\frac{a}{b}$ oranında kesilir. Ortası x cm kayar ise telin tamamı $\frac{2.x.b}{a}$ dir.

O halde $\frac{a}{b} = \frac{1}{8}$ $\qquad x = 6$ cm

$\frac{2.6.8}{1} = 96$ cm'dir.

Cevap: D

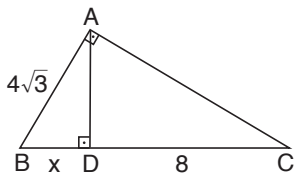
74. $A = \begin{bmatrix} a & b \\ c & d \end{bmatrix} \qquad A^{-1} = \frac{1}{\det A}\begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$

$A = \begin{bmatrix} -1 & 2 \\ 2 & -3 \end{bmatrix} \qquad A^{-1} = -1.\begin{bmatrix} -3 & -2 \\ -2 & -1 \end{bmatrix}$

$\det A = +3 - 4 = -1 \qquad = \begin{bmatrix} 3 & 2 \\ 2 & 1 \end{bmatrix}$

Cevap: A

75.



$(4\sqrt{3})^2 = x.(x + 8)$

$48 = x^2 + 8x \qquad x^2 + 8x - 48 = 0 \qquad \boxed{x = 4}$

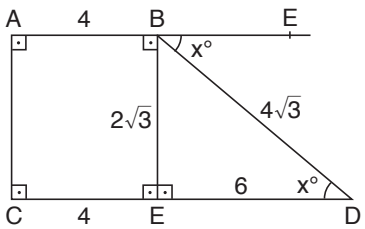
$x \qquad +12$

$x \qquad -4$

$|AD| = 4\sqrt{2} \qquad A(ABC) = \frac{12.4\sqrt{2}}{2} = 24\sqrt{2}$

Cevap: B

76.



$|BE|^2 + 6^2 = (4\sqrt{3})^2 \Rightarrow 48 - 36 = 12$

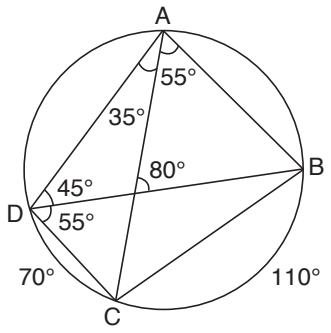
$|BE| = 2\sqrt{3}$

$\tan x = \frac{2\sqrt{3}}{6} = \frac{\sqrt{3}}{3} \qquad x = 30°$

Cevap: B

Diğer Sayfaya Geçiniz.

77.



$m(\widehat{AB}) = 90 \quad \frac{90 + m(\widehat{DC})}{2} = 80 \quad m(\widehat{DC}) = 70$

$m(\widehat{DAC}) = 35$

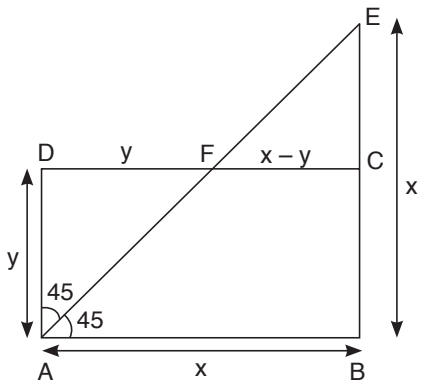
$m(\widehat{DCB}) + m(DAB) = 180$

$m(\widehat{DCB}) + 90 = 180$

$m(\widehat{DCB}) = 90$

Cevap: C

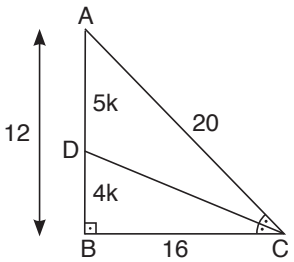
78.



$|FC| = x - y$

Cevap: E

79.



$9k = 12 \quad k = \frac{4}{3} \quad |AD| = \frac{20}{3}$

$(\widehat{ADC}) = \frac{\frac{20}{3} \cdot \cancel{16}^{8}}{\cancel{2}} = \frac{160}{3}$

Cevap: D

80. $d_1 = \frac{x}{2} + y = 1 \Rightarrow \quad x + 2y = 2$

$d_2 = \frac{x}{-2} + \frac{y}{2} = 1 \Rightarrow -x + y = 2$

$+$

$3y = 4$

$y = \frac{4}{3} \quad x = -\frac{2}{3}$

Cevap: A