YÖS

EN DENEME

DENEME SINAVI

EN DENEME & INTYÖS İŞBİRLİĞİ İLE ÜNİVERSİTELERİN YÖS SINAVLARINA UYGUN YENİ NESİL 5'Lİ DENEME

5

INTERNATIONAL YÖS

1. A, B ve C birer rakamdır.

$A - 2 \cdot B = C$

koşulunu sağlayan üç basamaklı ABC doğal sayıları oluşturuluyor.

Bu şekilde oluşturulan kaç tane sayı vardır?

A, B and C are numbers. ***How many three-digit natural numbers are there that meet the requirement "A – 2·B = C" ?***

A) 17 B) 24 C) 29 D) 15 E) 26

$A = 2B + C$

0	9 tane
1	8 tane
2	6 tane
3	4 tane
4	2 tane

29 tane

2. a7bc ve a2bc dört basmaklı doğal sayılardır.

a2bc sayısının 15 ile bölümünden kalan 11 olduğuna göre, a7bc sayısının 15 ile bölümünden kalan kaçtır?

a7bc and a2bc are four-digit natural numbers. Since the remainder is 11 when a2bc is divided by 15, ***what is the remainder when a7bc is divided by 15?***

A) 0 B) 1 C) 7 D) 11 E) 14

$a2bc + 500 = a7bc$

Kalan ⇒ 11

$16 \mid 15$

$-$

1

3. **K ve L doğal sayılardır.**

$K \mid 15$

$L+1$

$-$

L

$15 > L$

$L = 14$

Yukarıdaki bölme işlemine göre K en çok kaçtır?

K and L are natural numbers. ***What is K at most according to the division*** $K \mid 15$ ***?*** $L+1$ / L

A) 242 B) 239 C) 240 D) 241 E) 245

$K \mid 15$

15

$-$

14

$15 \cdot 15 + 14 = 225 + 14$

$= 239$

4. $\frac{0,24}{0,3} - \frac{0,012}{0,04} + \frac{0,001}{0,02} = ?$

A) 0,055 B) 0,55 C) 5,5 D) 55 E) 5

$\frac{24}{30} - \frac{12}{40} + \frac{1}{20}$

$\frac{8}{10} - \frac{3}{10} + \frac{1}{20} = \frac{5}{10} + \frac{1}{20} = \frac{10}{20} + \frac{1}{20} = \frac{11}{20}$

$\frac{11}{20} = \frac{55}{100} = 0,55$

5. $\sqrt{\frac{3^{x+2y+1}}{9^{y-2x-2}}} = 81 \Rightarrow x = ?$

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

$\Rightarrow \frac{3^{x+2y+1}}{(3^2)^{y-2x-2}} = (3^4)^2$

$\Rightarrow \frac{3^{x+2y+1}}{3^{2y-4x-4}} = 3^8$

$3^{x+2y+1-2y+4x+4} = 3^8$

$3^{5x+5} = 3^8 \quad 5x+5=8 \quad 5x=3 \quad x=3/5$

7. $A = \{x \mid -20 \le x < 241 \quad x = 2k, k \in Z\}$

$B = \{y \mid -16 < y \le 252 \quad y = 3k, k \in Z\}$

$\Rightarrow n(A \cap B') = ?$

A) 93 B) 90 C) 89 D) 87 E) 88

$S(A) \Rightarrow -20, -18 \ldots 240 \Rightarrow 2k$

$\frac{240-(-20)}{2}+1 \quad \frac{260}{2}+1 = 131$

$S(A \cap B) \Rightarrow -12, -6 \ldots 240$

$\frac{240-(-12)}{6}+1 \quad \frac{252}{6}+1 = 43$

$S(A \cap B') = 131 - 43 = 88$

6. $f: R-\{2\} \to R-\{-1\}$

$f(x) = \frac{-x+5}{x-2} \Rightarrow x = \frac{2f(x)+5}{f(x)+1}$ elde edilebilir

olduğuna göre f(x + 2) nin f(x) cinsinden eşiti aşağıdakilerden hangisidir?

Since $f: R-\{2\} \to R-\{-1\}$, $f(x) = \frac{-x+5}{x-2}$,

Which of the following is the equivalent of f(x + 2) in terms of f(x)?

A) $\frac{f(x)+2}{f(x)+5}$ B) $\frac{f(x)+2}{2f(x)+5}$ C) $\frac{f(x)-2}{f(x)-5}$

D) $\frac{f(x)-2}{2f(x)+5}$ E) $\frac{2f(x)+2}{f(x)-5}$

$f(x+2) = \frac{-(x+2)+5}{(x+2)-2} = \frac{-x+3}{x}$

$(x \to x+2)$

oysa; $x = \frac{2f(x)+5}{f(x)+1}$ idi.

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

8. $x \in Z$

$|x-2| + |x+5| = 7 \Rightarrow$ Ç.K = ?

A) −12 B) −10 C) −9 D) −8 E) −5

$x-2 \le 0$

$x+5 \ge 0 \Rightarrow -5 \le x \le 2$

$-5, -4, -3, -2, -1, 0, 1, 2$

$\Sigma x = -12$

9. $\left(\frac{x^4+27x}{x^2-x-12}\cdot\frac{x^2-16}{x^2+5x}\right):\left(\frac{x^2-3x+9}{2x+10}\right)=?$

A) $x+4$ B) $2\cdot(x+4)$ C) $\frac{x-3}{x+4}$ D) $\frac{2x-6}{x-4}$ E) $\frac{x+4}{x-3}$

$\frac{x(x^3+27)}{(x-4)(x+3)}\cdot\frac{(x-4)(x+4)}{x(x+5)}\cdot\frac{2(x+5)}{(x^2-3x+9)}$

(x^3+27)

$2(x+4)$

11. Şeker oranı %20 olan 20 gram şekerli suya 2a gr şeker, a gram su ilave ediliyor.

Oluşan yeni karışımın şeker oranı %50 olduğuna göre, a kaçtır?

2a grams of sugar and a grams of water are added to 20 grams of sugar water with a sugar ratio of 20%. As the sugar ratio of the water we have in the end is 50%, ***what is "a"?***

A) 4 B) 6 C) 8 D) 10 E) 12

$20\cdot\frac{20}{100}=4$ gr şeker

$(20+3a)\frac{1}{2}=4+2a$

$20+3a=8+4a$

$a=12$

10. **3, 4, 5 ve 8'e bölündüğünde 1 kalanını veren 2400 den küçük en büyük sayının onlar basamağındaki rakam kaçtır?**

What is the digit on the tens digit of the biggest number which is less than 2400 and gives the remainder of 1 when divided by 3, 4, 5 and 8?

A) 0 B) 1 C) 2 D) 7 E) 8

EKOK(3,4,5,8) = 120

2400'den küçük 1 kalanı veren sayı

$120\times19+1=2281$

→ ONLAR

12. Bir satıcı satmış olduğu ürünlerin fiyatını %30 azalttığında, bir günde satılan ürün sayısının %60 arttığını görüyor.

Buna göre, satıcının bir günde kasasına giren para yüzde kaç artmıştır?

A vendor realizes that when he discounts the prices of the products by 30%, sales increase by 60%. According to this data given, ***what percentage is the increase in the daily turnover of the vendor?***

A) 12 B) 13 C) 14 D) 15 E) 16

Fiyat	Adet	Kasa
10	10	100
7	16	112 (12)

%12

13. $\left.\begin{array}{l}\frac{a-3}{2}+\frac{b-1}{3}=-2\\ \frac{a+2}{4}-\frac{b+3}{2}=\frac{5}{4}\end{array}\right\} \Rightarrow a\cdot b=?$

A) 7 B) $\frac{5}{2}$ C) $-\frac{1}{2}$ D) $-\frac{5}{2}$ E) −7

Gik. gesilet $\Rightarrow 3a-9+2b-2=-12$

$3a+2b=-1$ (1)

4ik gesilet $\Rightarrow a+2-2b-6=5$

$a-2b=9$ (2)

1xe 2 ekle $3a+2b=-1$

$a-2b=9$

$4a=8 \quad a=2 \quad b=-\frac{7}{2}$

$ab=2\cdot\left(-\frac{7}{2}\right)=-7$

14. $P(x)=ax^2+bx+c$

$P(-2)=P(1)=5$

$P(x)\,|\,x+1 \Rightarrow$ kalan 9, $P(-1)=9$

$P(x-2)\,|\,x+2 \Rightarrow$ kalan ?, $P(-4)=?$

A) −10 B) −12 C) −14 D) −15 E) −16

$P(-2)=4a-2b+c=5$

$P(1)=a+b+c=5$ } T.T.G, T.T.T

$P(-1)=a-b+c=9$

$2b=-4 \Rightarrow b=-2$

$2(a+c)=14$

$\Rightarrow a+c=7$

$4a+c+4=5 \hookrightarrow 4a+c=1$

$4a+c=1$

$a+c=7$

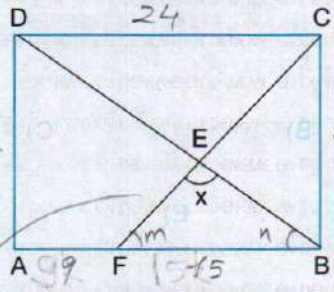
$3a=-6 \Rightarrow a=-2 \quad c=9$

$P(x)=-2x^2-2x+9$

$\hookrightarrow P(-4)=-32+8+9$

$=-15$

15.



ABCD bir dikdörtgen, $|DC|=3\cdot|AD|$, $3\cdot|FB|=5\cdot|AF|$

$\tan x=?$

ABCD is a rectangle. Since $|DC|=3\cdot|AD|$, $3\cdot|FB|=5\cdot|AF|$, ***what is*** $\tan x=?$

A) $-\frac{39}{37}$ B) $-\frac{37}{39}$ C) $\frac{37}{39}$ D) $\frac{39}{37}$ E) $-\frac{35}{37}$

$m+n+x=\pi$

$\Rightarrow x=\pi-(m+n)$

$\Rightarrow \tan x=\tan[\pi-(m+n)]$

$=-\tan(m+n)$

$=-\frac{\tan m+\tan n}{1-\tan m\cdot\tan n}=-\frac{\frac{8}{15}+\frac{1}{3}}{1-\frac{8}{15}\cdot\frac{1}{3}}$

$\tan m=8/15$, $\tan n=8/24=1/3$

$=-\frac{39}{37}$

16. $x\in Z$

$\log_2\left(\frac{x+1}{x-2}\right)<1 \Rightarrow \sum x=?$

A) −8 B) −10 C) −14 D) −15 E) −16

$\frac{x+1}{x-2}>0 \Rightarrow$ (−1, 2)

$x\in(-\infty,-1)\cup(2,\infty)$: Ç.K.$_1$

$\log_2\left(\frac{x+1}{x-2}\right)<\log_2 2$

$\Rightarrow \frac{x+1}{x-2}<2$

$\Rightarrow \frac{x+1}{x-2}-2<0$

$\Rightarrow \frac{-x+5}{x-2}<0$ → (2, 5)

$x\in(-\infty,2)\cup(5,\infty)$: Ç.K.$_2$

Ç.K. = Ç.K.$_1$ ∩ Ç.K.$_2$

$=(-\infty,-1)\cup(5,\infty)$

$\ldots,-6,-5,-4,-3,-2$ + $6,7,\ldots$

$\sum x=0+(-14)$

$=-14$

17. $x = \sqrt{6} + \sqrt{4}$

$y = \sqrt{8} + \sqrt{3}$

$z = \sqrt{12} + \sqrt{2}$

olduğuna göre, aşağıdaki sıralamalardan hangisi doğrudur?

Since $x = \sqrt{6} + \sqrt{4}$, $y = \sqrt{8} + \sqrt{3}$, $z = \sqrt{12} + \sqrt{2}$, ***Which of the ordering below is right?***

A) $x < y < z$ B) $x < z < y$ C) $y < x < z$ D) $z < y < x$ E) $z < x < y$

$x^2 = 10 + 2\sqrt{24}$

$y^2 = 11 + 2\sqrt{24}$

$z^2 = 14 + 2\sqrt{24}$ $\Rightarrow z > y > x$

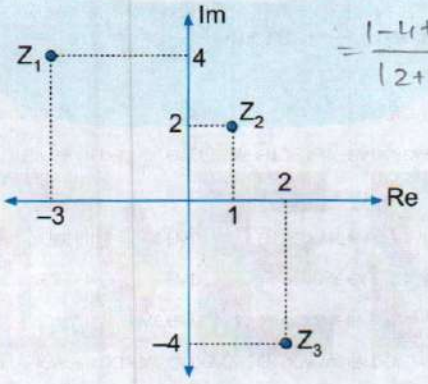
$z_1 = -3 + 4i$

$z_2 = 1 + 2i$

$z_3 = 2 - 4i$ $\rightarrow z_1 - z_2 = -4 + 2i$

$\Rightarrow \left|\frac{z_1 - z_2}{z_3}\right| = \left|\frac{-4+2i}{2+4i}\right| = \frac{|-4+2i|}{|2+4i|} = \frac{\sqrt{4^2+2^2}}{\sqrt{2^2+4^2}} = 1$

18.



$\left|\frac{Z_1 - Z_2}{Z_3}\right| = ?$

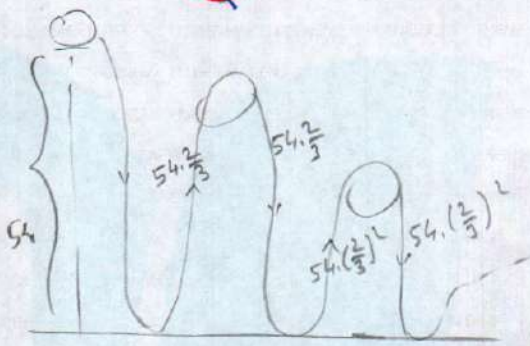
A) $\frac{\sqrt{10}}{5}$ B) $\frac{\sqrt{2}}{2}$ C) $\frac{\sqrt{5}}{10}$ D) E) $\frac{\sqrt{10}}{2}$

19. Bir top 54 metre yükseklikten bırakılıyor. Top yere her çarptığında, düştüğü yüksekliğin $\frac{2}{3}$'ü kadar yükseliyor.

Buna göre topun düşeyde aldığı yolların toplamı kaç metredir?

A ball is dropped from a height of 54 meters. Every time the ball hits the ground, it rises 2/3 of the height it falls. According to this, ***how many meters is the total of the vertical paths the ball travels?***

A) 250 B) 270 C) 280 D) 290 E) 300



Toplam yol $= 54 + 2.54.\frac{2}{3} + 2.54.(\frac{2}{3})^2 + \cdots$ → Sen başlasana süreci...

$= 54 + 108.\frac{2}{3}\left[1 + \frac{2}{3} + \cdots\right] = 54 + 108.\frac{2}{3}.\frac{1}{1-\frac{2}{3}}$

$= 54 + 72.3$

$= 270$ m.

20. $\lim_{x \to 0} (e^{2x} - 3x)^{\frac{1}{x}} = ?$ (1^∞)

A) e^5 B) e^3 C) e^{-1} D) e^{-3} E) e^{-5}

$y = (e^{2x} - 3x)^{1/x}$

$\ln y = \ln (e^{2x} - 3x)^{1/x}$

$= \frac{\ln(e^{2x} - 3x)}{x} \rightarrow \left(\frac{0}{0}\right)$ s L'H

$\Rightarrow = \frac{\frac{2e^{2x} - 3}{e^{2x} - 3x}}{1}$

$= \frac{2e^{2x} - 3}{e^{2x} - 3x}$; oysa, $\lim_{x \to 0} \frac{2e^{2x} - 3}{e^{2x} - 3x}$

$= \frac{2-3}{1-0} = (-1)$

Suhalde

$\lim_{x \to 0} \ln y \rightarrow -1 = \ln e^{-1}$

$\Rightarrow y = e^{-1}$

21. 8 sayının aritmetik ortalaması 16 dır. Bu sayılardan, aritmetik ortalaması 7 olan 4 sayı çıkarılıyor.

Buna göre, geriye kalan sayıların ortalaması kaçtır?

Arithmetic mean of eight numbers is 16. Four numbers, whose arithmetic mean is 7, are removed from the other numbers. According to this data given, ***what is the arithmetic mean of the remaining numbers?***

A) 24 B) 25 C) 26 D) 27 E) 28

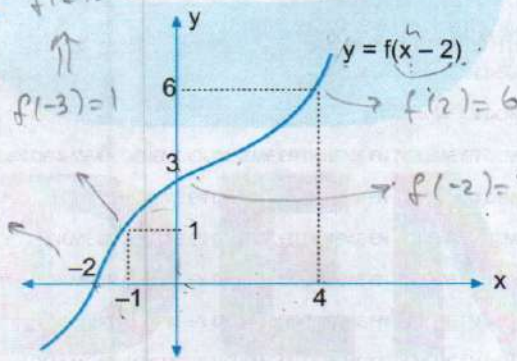
8 sayı toplamı $\Rightarrow 8 \cdot 16 = 128$

4 sayı toplamı $\Rightarrow 4 \cdot 7 = 28$

Kalan sayıların toplamı $= 100$

ortalama $= \frac{100}{4} = 25$

22.



$f'(1) = -3$

$f(-3) = 1$

$f(2) = 6$

$f(-4) = 0$

$f(-2) = 3$

$f'(0) = -4$

$\frac{f(2) - f(-2)}{f^{-1}(1) + f^{-1}(0)} = ?$ (a, b)

$\frac{6-3}{-3+(-4)} = \frac{3}{-7}$

A) $-\frac{4}{7}$ B) $-\frac{3}{7}$ C) $-\frac{1}{7}$ D) $\frac{3}{7}$ E) $\frac{4}{7}$

$x = 4 \Rightarrow f(4-2) = 6 \quad f(2) = 6$

$f(-2) = 0$

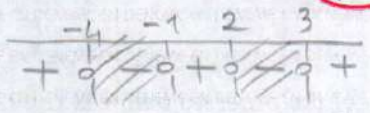
$f(a) = 1 \quad a = -1$

$f(b) = 0 \quad b =$

23. $x \in Z$ $\quad + (x = -2)$ $\quad (x-3)(x+1)$

$$\frac{|x+2| \cdot (x^2 - 2x - 3)}{(x-2) \cdot (x+4)} \leq 0 \Rightarrow \sum x = ?$$

A) −10 B) −7 C) −5 D) −3 E) 3



$x \in (-4, -1] \cup (2, 3]$

$-3, -2, -1 \quad 3 \rightarrow \sum x = -3$

24. $\tan\left(\arccos\left(-\frac{3}{5}\right) + \arcsin\left(\frac{12}{13}\right)\right) = ? = \tan(u+v) = ?$

A) $-\frac{16}{63}$ B) $-\frac{16}{33}$ C) $\frac{16}{33}$ D) $\frac{13}{63}$ E) $\frac{16}{63}$

$\cos u = -\frac{3}{5}$ (II. veya III. bölge)

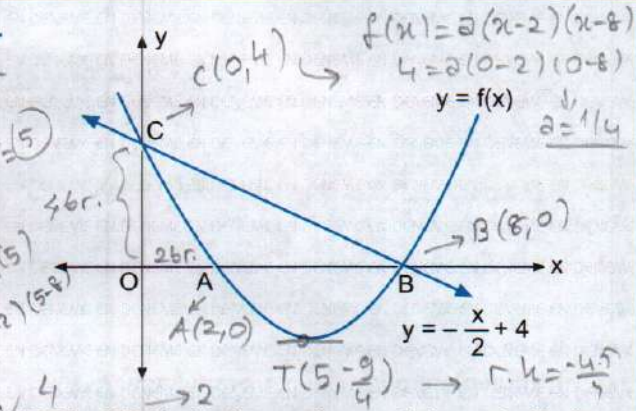
$\tan u = \frac{4}{3}$ (II. bölgede $-\frac{4}{3}$, III. $\rightarrow \frac{4}{3}$)

$\sin v = \frac{12}{13} \quad \tan v = \frac{12}{5}$

$\tan(u+v) = \frac{\tan u + \tan v}{1 - \tan u \cdot \tan v} = \frac{-\frac{4}{3} + \frac{12}{5}}{1 - \left(-\frac{4}{3}\right)\frac{12}{5}} = \frac{+16/15}{21/15}$

$= \frac{16}{63}$

25.



|OC| = 2|OA| olduğuna göre y = f(x) parabolünün tepe noktasının koordinatları çarpımı kaçtır?

Since |OC| = 2|OA|, ***What is the product of the coordinates of the vertex of the parabola*** ***y = f(x)*** *?*

A) $-\frac{45}{4}$ B) $-\frac{37}{4}$ C) $-\frac{31}{4}$ D) $-\frac{28}{3}$ E) $-\frac{25}{3}$

27. $f(x) = \ln(x^2 + 2x + 2) + x^{x^2} \Rightarrow f'(1) = ?$

A) $\frac{2}{3}$ B) 1 C) $\frac{4}{5}$ D) $\frac{9}{5}$ E) 2

26. $f : R^+ \to R$

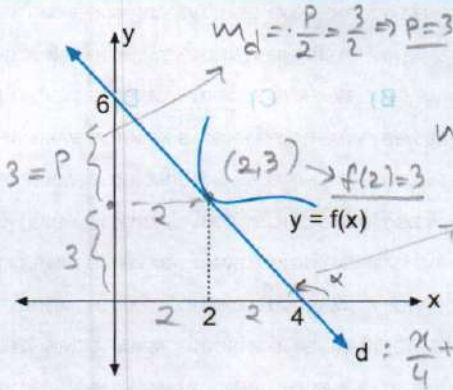
$$\left.\begin{array}{l} f^{-1}(2x) = g(x) \\ f(3) = 4 \\ f'(x) = x^2 + 3x \end{array}\right\} \Rightarrow g'(2) = ?$$

A) $\frac{1}{9}$ B) $\frac{2}{9}$ C) $\frac{5}{9}$ D) $\frac{9}{2}$ E) $\frac{9}{5}$

28. $\lim_{x \to 2} \frac{\sin\left(\tan\left(\frac{\pi}{2} \cdot x\right)\right)}{e^{2x-4} - 1} = ?$

A) $\frac{\pi}{2}$ B) $\frac{\pi}{4}$ C) $\frac{\pi}{3}$ D) $\frac{2\pi}{3}$ E) π

29.



$m_d = -\frac{P}{2} = \frac{3}{2} \Rightarrow P = 3$

$\tan(\pi - \alpha)$

$m_d = -\frac{6}{4} = -\frac{3}{2}$

$(2,3) \rightarrow f(2) = 3$

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

$$g(x) = \frac{f(2x+1)}{x^2-1} \Rightarrow g'\left(\frac{1}{2}\right) = ?$$

A) $-\frac{13}{3}$ B) -5 C) $-\frac{14}{3}$ D) $-\frac{16}{3}$ E) $-\frac{4}{3}$

$$g'(x) = \frac{2f'(2x+1).(x^2-1) - 2x.f(2x+1)}{(x^2-1)^2}$$

$-3/2$; 3 ; $x_0 = \frac{1}{2}$

$$\Rightarrow g'\left(\frac{1}{2}\right) = \frac{2.f'(2).\left(-\frac{3}{4}\right) - 1.f(2)}{\left(-\frac{3}{4}\right)^2} = \frac{2.(-3/2).(-3/4) - 1.3}{9/16}$$

$$= \frac{\frac{9}{4} - 3}{9/16} = \frac{-3/4}{9/16} = \frac{-4}{3}$$

30. $f(x) = \int_{x^2-1}^{x^3+x} (t^2-1)\,dt \Rightarrow f'(1) = ?$

A) 10 B) 11 C) 13 D) 14 E) 15

Leibnitz

$$f'(x) = \left((x^3+x)^2-1\right).(x^3+x)' - \left((x^2-1)^2-1\right).(x^2-1)'$$

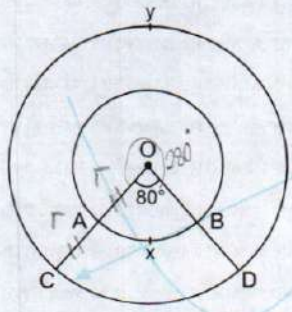
$$= \left((x^3+x)^2-1\right).(3x^2+1) - \left((x^2-1)^2-1\right).2x$$

$x_0 = 1$

$$\Rightarrow f'(1) = \left(2^2-1\right).(3+1) - (-1).2.1$$

$$= 3.4 + 2 = 14$$

31.



İç içe çizilmiş O merkezli iki çemberde

$m(\widehat{COD}) = 80°$

$|AO| = |AC|$

$2\pi.(r).\frac{80}{360}$

Verilenlere göre, $\frac{|\widehat{AxB}|}{|\widehat{CyD}|}$ **oranı kaçtır?**

$2\pi.(2r).\frac{280}{360}$

$= \frac{r.80}{2r.280} = \frac{1}{7}$

$m(\widehat{COD}) = 80°$, $|AO| = |AC|$ for two circles, whose center is "O" and one of which is drawn inside the other.

What is the ratio of $\frac{|\widehat{AxB}|}{|\widehat{CyD}|}$ ***according to the data given above?***

A) $\frac{1}{2}$ B) $\frac{1}{3}$ C) $\frac{1}{4}$ D) $\frac{1}{5}$ E) $\frac{1}{7}$

32.

$r^2 = (2-3)^2 + (7-5)^2$

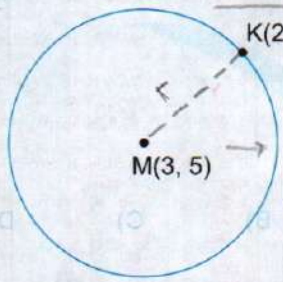
$= 1 + 4$

$= 5$

$\Rightarrow r = \sqrt{5}$

$\Rightarrow (x-a)^2 + (y-b)^2 = r^2$

$\Rightarrow (x-3)^2 + (y-5)^2 = 5$



Yukarıda verilen çemberin denklemi aşağıdakilerden hangisidir?

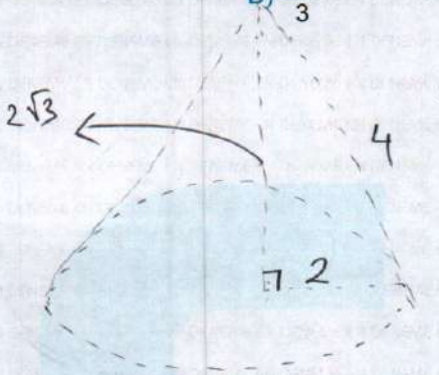
Which equation below is for the circle given above?

A) $(x-3)^2 + (y-5)^2 = 5$
B) $(x-2)^2 + (y-7)^2 = 8$
C) $(x+3)^2 + (y+5)^2 = 5$
D) $(x-3)^2 + (y+5)^2 = 5$
E) $(x+3)^2 + (y-5)^2 = 5$

33. **Taban yarıçapı 2 cm, ana doğrusu 4 cm olan dik koninin hacmi kaç cm³ tür?**

How many cubic centimeters is the volume of a right cone whose base radius is 2 cm and generatrix is 4 cm?

A) $\frac{4\sqrt{3}\pi}{3}$ B) $\frac{8\sqrt{3}\pi}{3}$ C) $\frac{16\pi}{3}$ D) $\frac{32\pi}{3}$ E) 12π

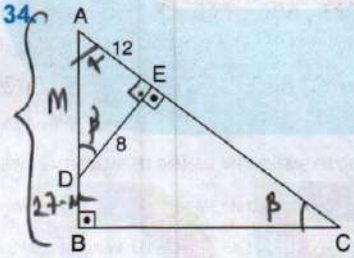


$\frac{\pi r^2 h}{3}$

$\frac{\pi \cdot 4 \cdot 2\sqrt{3}}{3}$

$\frac{8\pi\sqrt{3}}{3}$

34. ABC dik üçgen,
[DE] ⊥ [AC]
|DE| = 8 cm
|AE| = 12 cm
|AB| = 27 cm



olduğuna göre, |BC| kaç cm'dir?

ABC is a right triangle and [DE] ⊥ [AC], |DE| = 8 cm, |AE| = 12 cm, |AB| = 27 cm. ***How many cm is |BC| according to the data given?***

A) 21 B) 20 C) 18 D) 16 E) 12

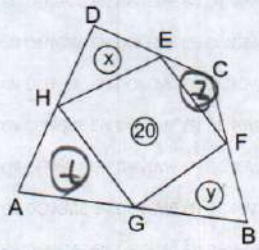
$\frac{\beta}{9} \quad \frac{\alpha}{12} \quad 90°$

$\frac{27}{12} = \frac{BC}{8}$

$\frac{4}{1} \quad \frac{2}{2}$

$BC = 18$

35.



ABCD bir dörtgen
E, F, G, H noktaları orta noktalar
A(DEH) = x
A(BGF) = y
A(EFGH) = 20 cm²

olduğuna göre, x + y sonucu nedir?

ABCD is a quadrilateral. E, F, G and H are midpoints. A(DEH) = x, A(BGF) = y, A(EFGH) = 20 cm² *and* ***what is x + y = ?***

A) 10 B) 12 C) 14 D) 15 E) 20

$A(ABCD) = 2 \cdot A(EFGH)$

20

$A(ABCD) = 40 \Rightarrow x+y+z+t = 20$

$x+y = z+t$

$2(x+y) = 20$

$x+y = 10$

36. 123
234
345 ⇒ **234 = ?**
456
612

A) ERP B) PMB C) RPM D) BNE E) NER

B → 6 (ortada hiç yok)
M → 5 (Başta yok)
1 → N (Sonda yok)

Gerekli eklemeler yapıldığında yanıt A dır

veya

BNE – NER – ERP – RPM – PMB
12 – 123 – 234 – 345 – 456

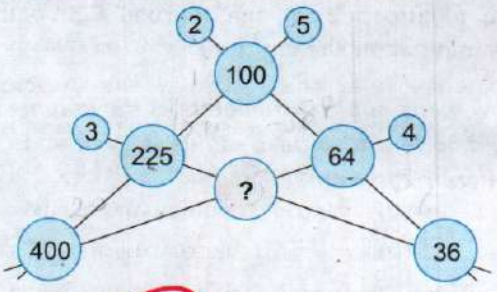
37.

K E M
+ K A N
S A E K

M = ?

A) 4 B) 5 C) 6 D) 7 E) 8

39.



A) 49 B) 144 C) 24 D) 68 E) 120

En dıştaki dairelerin içinde sayıların çarpımının karesi.

$400 \Rightarrow 5.4 \Rightarrow 20 \Rightarrow 20^2 = 400$

$36 \Rightarrow 2.3 \Rightarrow 6 \Rightarrow 6^2 = 36$

$100 \Rightarrow 2.5 \Rightarrow 10 \Rightarrow 10^2 = 100$ gibi.

$? = 4.3 = 12 \Rightarrow 12^2 = 144$

38. 648 ϒ 124 → 7232 $8.4=32$ $6+1=7$ $4-2=2$

897 ϒ 143 → 9521 $7.3=21$ $8+1=9$ $9-4=5$

765 ϒ 222 → 9410 $5.2=10$ $7+2=9$ $6-2=4$

564 ϒ 117 → 3528 $4.7=28$ $5+1=6$ $6-1=5$

A) 3528 B) 6282 C) 6444 D) 6427 E) 6528

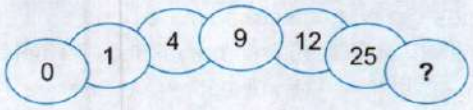
40. 11 , 24 , 39 , 416 , 525 , 636 , 749 , ?

A) 864 B) 884 C) 885 D) 878 E) 843

- Onlar basamağı 1'er artıyor
  1, 2, 3, 4, 5, 6, 7, 8 olmalı
- Birler basamağı tam kareler

1, 4, 9, 16, 25, 36, 49, 64

41.



A) 35 B) 21 C) 39 D) 26 E) 28

0×2+1 = 1

1+3 = 4 →

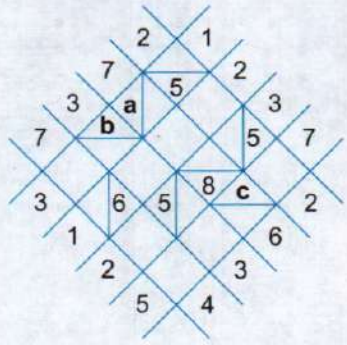
4×2+1 = 9

9+3 = 12 →

12×2+1 = 25

25+3 = 28 →

43.



a + b + c = ?

A) 28 B) 27 C) 25 D) 24 E) 23

a = 7+3 = 10

b = 3+1 = 4

c = 7+7 = 14

a+b+c ± 28

42.

x	B	U	R	A	Q
B					
U				0	6
R	12		9		
A					
Q			6		

B + U + R + A + Q = ?

4+3+3+0+2 = 12

A) 8 B) 9 C) 10 D) 11 E) 12

U×A = 0 A = 0

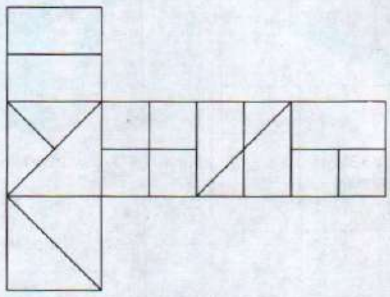
U×Q = 6 U = 3

R×B = 12 → B = 4

R×R = 9 → R = 3

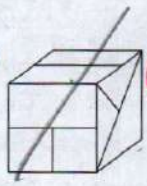
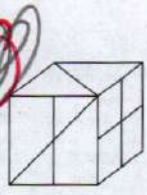
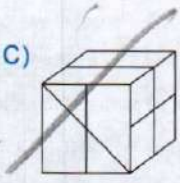
Q×R = 6 → Q = 2

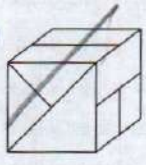
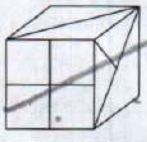
44.



Prizmanın kapalı hali aşağıdakilerden hangisidir?

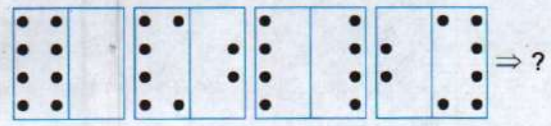
Which one below is the closed form of the prism?

A)  B)  C) 

D)  E) 

* şekil kapatıldığında B şıkkı olur

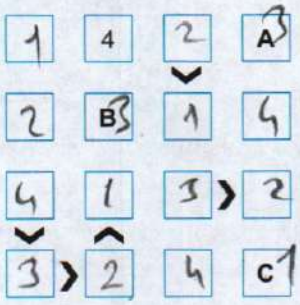
45.



A) 
B) 
C) 
D) 
E) 

İlkser ilkser bazı testler tamamlıyor...

47. Aşağıda verilen Futoshiki bulmacasında 1 - 2 - 3 - 4 rakamları satır ve sütunlarda yalnızca bir defa kullanılıp büyüktür (>) ve küçüktür (<) kurallarına uygun olarak yerleştiriliyor.



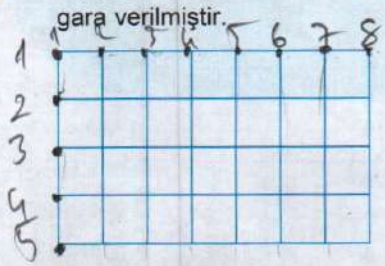
A + B + C = ?

3 + 3 + 1 = 7

Used only once in rows and columns, numbers 1-2-3-4 were put on the Futoshiki puzzle below in accordance with "the greater than (>)" and "less than (<)" rules. ***What is A + B + C = ?***

A) 6 B) 8 C) 7 D) 2 E) 9

46. Aşağıda 1x1 birimlik karelere bölünmüş 4x7 kibrit ızgara verilmiştir.



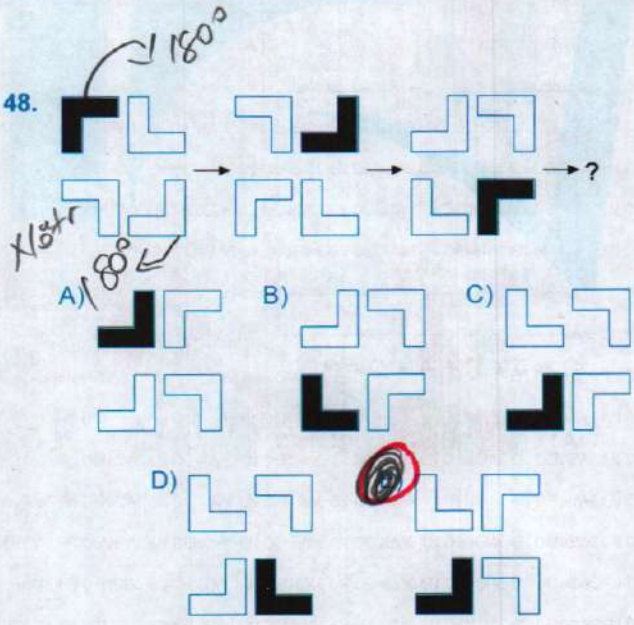
Bu kibrit ızgarada kaç tane köşe vardır?

A square grid is divided into 4x7 squares each of which is a square unit. ***How many corners are there in this square grid?***

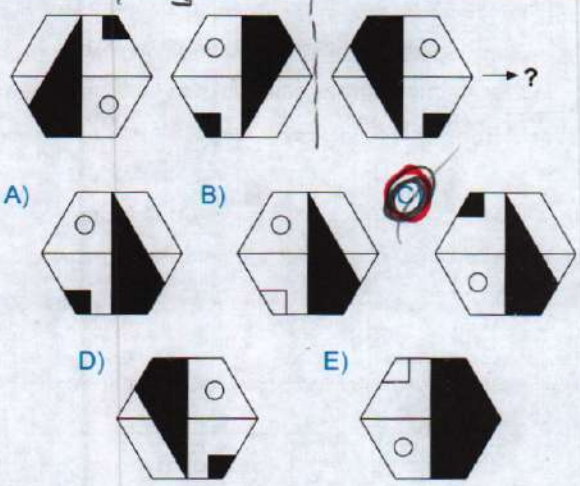
A) 42 B) 40 C) 38 D) 36 E) 34

8 x 5 = 40

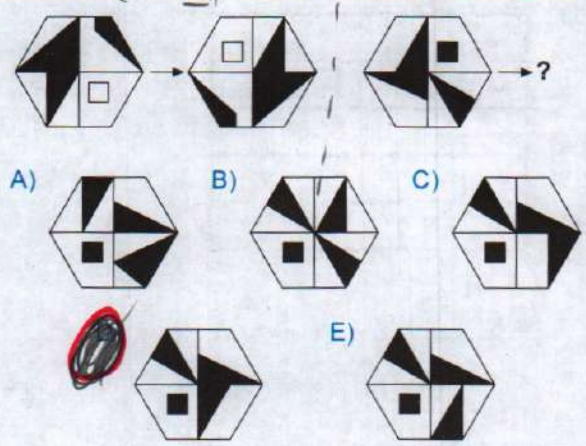
48.



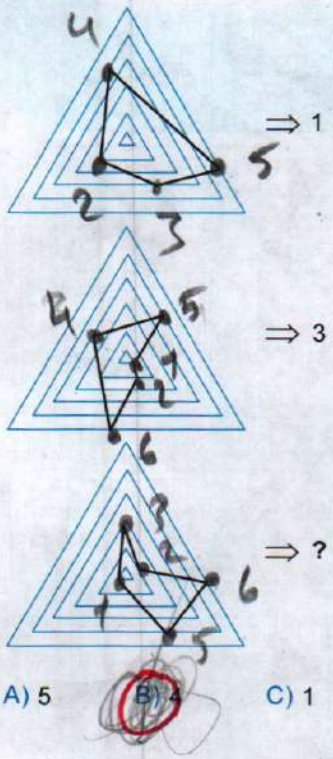
49.



51.

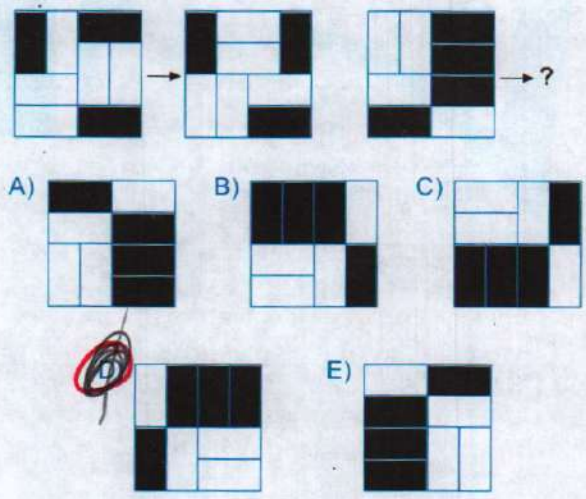


50.



İçten dışa üçgenleri numaralandırsak çizilen şeklin kesişim noktaları hangi üçgende yoksa o sonucu yazıyoruz.

52.



Önce saat yönünde 90° döndür sonra yukarı simetri

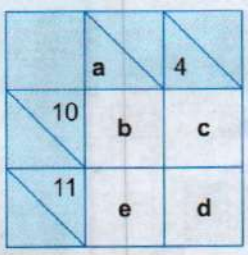
53.

2				4
M			1	
			5	
4	N	3		K

$\frac{M+N}{K} = ?$

A) 7 B) 8 C) 9 D) 10 E) 11

54.



a + b + d − c − e = ?

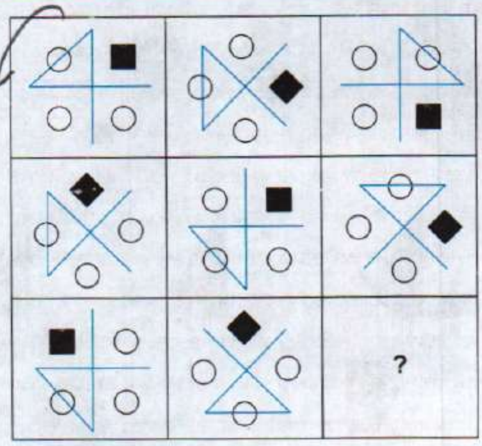
A) 23 B) 19 C) 20 D) 21 E) 22

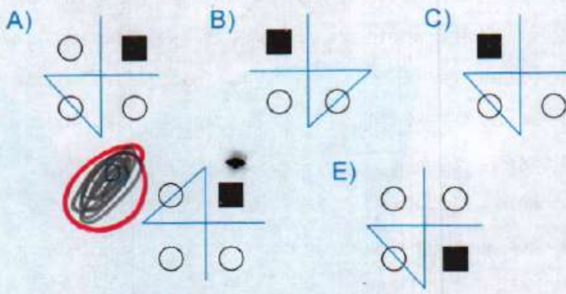
a+b+d−(c+e) = 2b+d−e = 2b−11

e+d = 11
b+c = 10
b+e = 9
c+d = 4

55.

45°

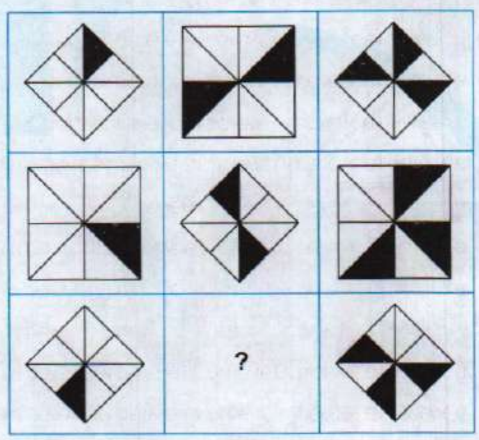


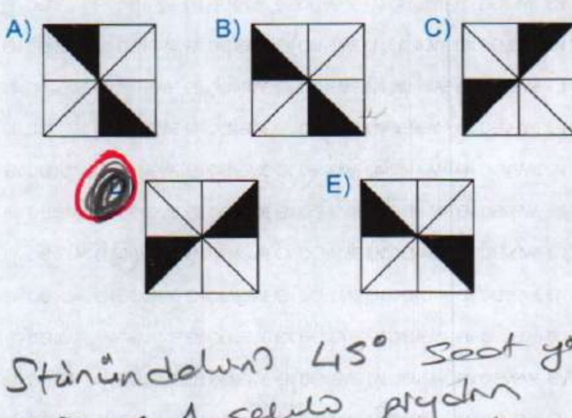


45°

1. 2.

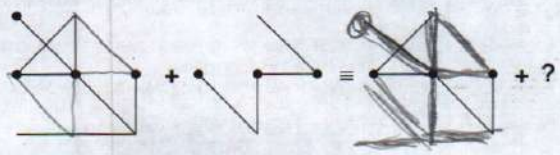
56.

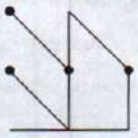
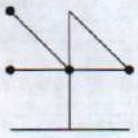
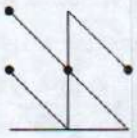


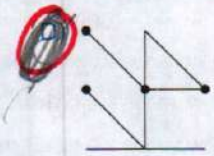
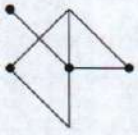


2. Stünündakını 45° saat yönünde döndür ve 1. sekilo oryalm 3. Stondoroo elde et.

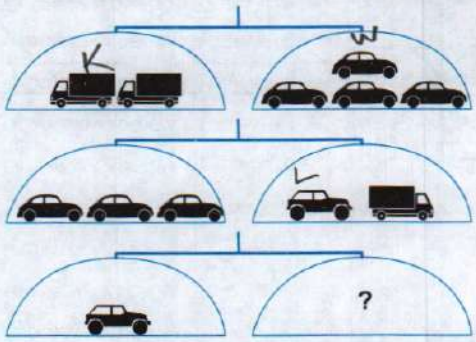
57.



A)  B)  C) 

 E) 

59.



A)  B)  

D)  E) 

$2K = 4W$

$K = 2W$

$3W = L + K$

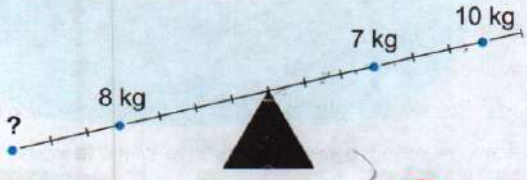
$3W = L + 2W$

$W = L$

↓ Langerous

↙ Wolkswagen

58.



A) 4 B) 5 C) 6 D) 7 E) 8

$(7 \times ?) + (8 \times 4) = (7 \times 3) + (10 \times 6)$

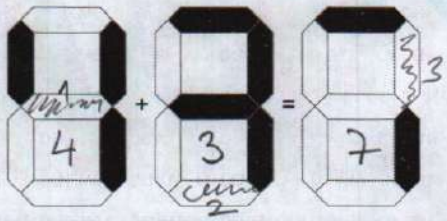
$? \times 7 = 81 - 32$

$? \times 7 = 49$

$? = 7$ //

60.

Dijital saat siyah segmentlerin yanması ile 0-9 arası rakamlar elde edilmektedir.



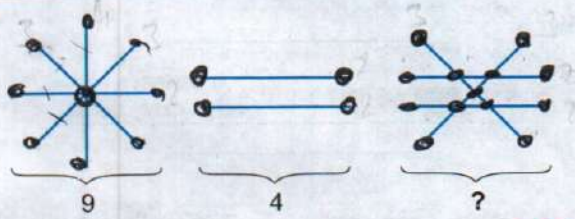
Buna göre işlemde eşitliğin sağlanması için kaç tane segmentin yanması gerekir?

Numbers from 0-9 are obtained by lighting digital clock segments. ***How many segments needed to be lit to obtain the equality in the operation?***

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

$4 + 3 = 7$

61.

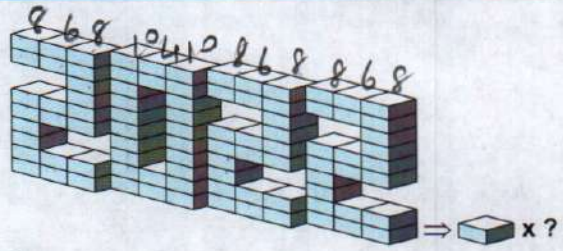


A) 1 B) 2 C) 5 D) 7 E) 13

İşaretlenen noktalar sayıldığında

? = 13 olur.

63.



A) 90 B) 91 C) 92 D) 93 E) 94

2 . 10 = 20
6 . 8 = 48
3 . 6 = 18
1 . 4 = 4
+
90

62.

Tangram parçalarının birleştirilmiş hali aşağıdakilerden hangisidir?

Which one below is the assembled form of the tangram pieces?

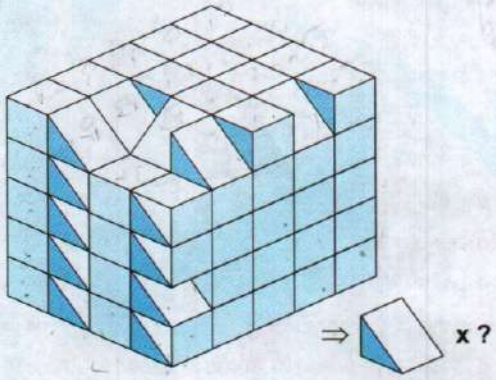
A)

B)

D)

E)

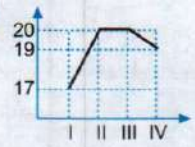
64.



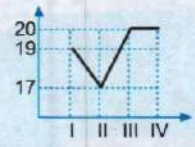
A) 92 B) 97 C) 186 D) 188 E) 189

65.

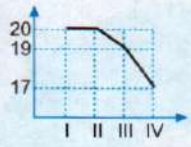
A)



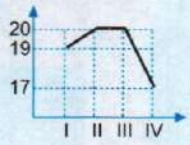
C)



D)



E)



67.

İ	2	4	5	7	9	3	6	8
3	6	7		8		T	9	5
9	5		S	6		2	4	7
5		6	3	A			8	9
	3	9	6			7		N
4	8	B	7				5	3
		2	8	5	6			
6	U	5	9		7	8		4
8	9			2	L	5		

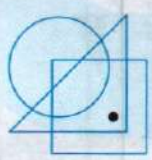
Yukarıda verilen sudokuda 1-9 kadarki rakamları öyle yerleştirelimki satır ve sutünda ve aynı kare içerisinde aynı rakamlar yan yana gelmesin.

Buna göre İSTANBUL = ?

In the Sudoku puzzle above, put numbers from 0 to 9 in such a way that no numbers meet each other vertically, horizontally or in the same square. According to the data given, ***what is İSTANBUL=?***

A) 22113211 B) 12451367 C) 14232332 D) 11112111 E) 11254611

66.

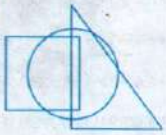


A)

B)

D)

E)



68.

1	1,5	2,5	4	6	8,5	?	15

A) 10,5 B) 11 C) 11,5 D) 12 E) 12,5

69. I. ♣3 = 9 → karesi alınıyor
II. ♣4 = 16
III. 3 □ 5 = 8 → toplanıyor
IV. 5♣ □ 4 = 29

(♣sinα) □ (♣cosα) = ?

A) 1 B) $\frac{\sin 2\alpha}{2}$ C) cos2α D) tgα E) ctgα

$\sin^2\alpha + \cos^2\alpha = 1$ olduğundan

A şıkkı olur.

70. I. (8, 1, 6, 5)Θ = 84
II. (6, 2, 9, 3)Θ = 96
III. 79♦ = 7
IV. (7, 4, 3, 2)Θ ♦ = 6

(5, 3, 4, 6)Θ ♦ = ?

A) 5 B) 6 C) 7 D) 8 E) 9

Θ Tek ve çift sayıları toplayıp çarpıyor

♦ → Rakamları topluyor

I ⇒ (8+6) x (1+5) = 14x6 = 84

III ⇒ (6+2) x (9+3) = 8x12 = 96

III ⇒ 7+9 = 16 1+6 = 7

IV ⇒ (7+3) x (4+2) = 10.6 = 60 6+0 = 6

(5+3) (4+6) = 8x10 = 80 8+0 = 8

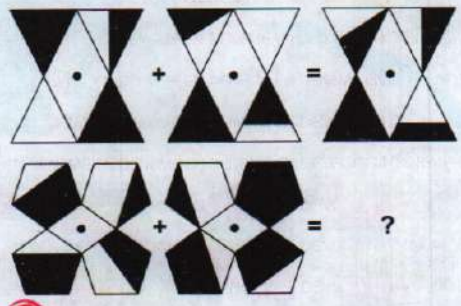
71. **Aşağıdaki harflerden hangisi bir yönü ile diğerlerinden farklıdır?**

Which of the following letters is different from the others in one aspect?

A) K B) A C) E D) N E) Y

Tek hareketle çizilmiş.

72.



A) B) C)

D) E)

* ilk şekil birbirine eklenip A şıkkı olur.

73. I. ◓ K = k

II. ⊖ N = N

III. ◓ h = h

IV. ⊘ u = U

DoReMi = ?

D o R e M i

A) ⊘ d ◓ O ⊖ R ◓ e ⊘ M ◓ i

B) ⊘ d ◓ o ◓ r ◓ E ⊘ m ◓ İ

C) ⊖ D ◓ o ⊖ r ◓ E ⊖ M ◓ i

D) ⊘ d ◓ O ⊖ R ◓ e ⊘ m ◓ İ

E) ⊖ D ◓ O ⊖ R ◓ e ⊘ m ◓ İ

D → Sonuna büyük harf istenmişse II veya IV olur

o → " küçük " " ise I veya III "

R → " büyük " " II veya IV "

e → " küçük " " I veya III "

Buna göre yazım yanlışlıkları şıklarda işaretlenmiş, gerekli eklemeler yapılmıştır

74. EN DENEME ⇒ 43243444

EN GÜZELİ ⇒ ?

A) 43144322

B) 43233422

C) 43232422

D) 43253422

E) 43153422

* Harfleri oluşturan çizgi sayıları yazılarak şifreleme yapılmış.

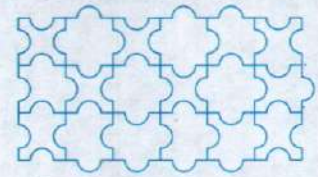
E N G Ü Z E L İ

4 3 2 3 3 4 2 2

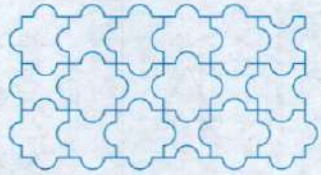
⇒ E N G Ü Z E L İ

4 3 2 3 3 4 2 2

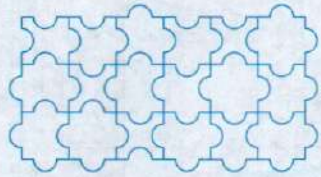
75.



⇒ 3; 3; 4; 4; 4



⇒ 5; 4; 4; 3; 2



⇒ ?; ?; ?; ?; ?

A) 2; 3; 3; 5; 5 B) 3; 3; 5; 2; 5

C) 5; 5; 3; 3; 2 D) 3; 2; 5; 5; 3

E) 2; 5; 5; 3; 3

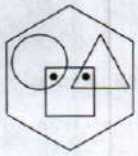
76.

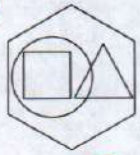
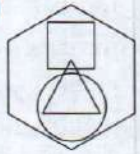
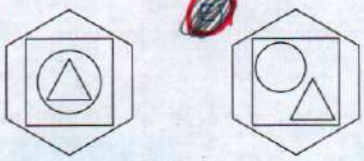
42	22	$\frac{4^3-2^2}{60}$	$\frac{2^3-2^2}{4}$
33	34	$\frac{3^3-3^2}{18}$	3^3-4^2

⇒

A) 9 B) 11 C) 12 D) 25 E) 27

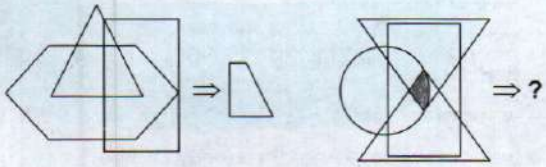
77.

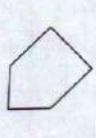


A) 
B) 
C) 
D) 

* İki kesişim bölgesi de kareye ait olduğundan kare daire ve üçgeni kapsayacak şekilde daha büyük çizilir.

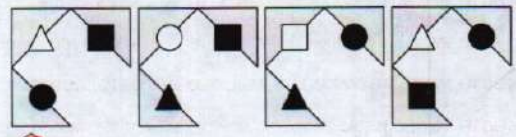
78.

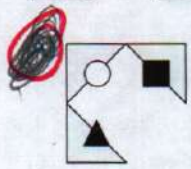
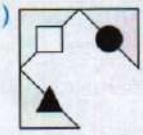
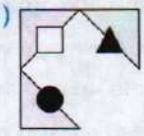
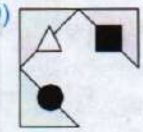
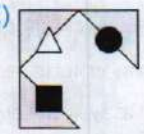


A) 
B)
C) 
D) 
E) 

Kesişim noktası alınıyor.

79.



A) 
B) 
C) 
D) 
E) 

* Verilen dizide her şekil bir kez gösterilmiş.
* 1 br saat yönü ters gidiyor şekiller, 1 tam tur attığında sol üst köşede 1 adım bekletiliyor.

Buna göre gerekli ebeler yapılırsa A şıkkı olur.

80.

$$\begin{array}{r} {}^{b}1\,A\,A^{6} \\ \times\quad 2\,A^{6} \\ \hline {}^{3}B\,B\,A^{6} \\ +\ C\,C\,2 \\ \hline 4\,C\,1\,A \end{array}$$

ABC = ?

A = 6
B = 9
C = 3

A) 396 B) 963 C) 693 D) 369 E) 936