

# YÖS

**EN**  
DENEME

# DENEME SINAVI

*Handwritten signature*

**EN DENEME & İNTYÖS**

**İŞBİRLİĞİ İLE**

**ÜNİVERSİTELERİN**

**YÖS SINAVLARINA UYGUN**

**YENİ NESİL 5'Lİ DENEME**

# 2

INTERNATIONAL

**YÖS**



12345 43125  
1. İRADE - DAİRE

COVİT - ?  
12345 → 43125

- A) VİCTO      B) TIVCO      C) IVCOT  
D) CİTOV      E) VOTİC

\* Harflerde yer değiştirme  
uyularak sonra ulaşılmıştır.

3. I.  $a * b = 2a + 3b$

II.  $c \Delta d = 2c + d$

III.  $6 * 8 = e \Delta 4$

$e = ?$

- A) 25      B) 13      C) 6      D) 16      E) 18

$$6 * 8 = 2 \cdot 6 + 3 \cdot 8 = 36$$

$$e \Delta 4 = 2e + 4$$

$$36 = 2e + 4 \Rightarrow 32 = 2e$$

$$\underline{\underline{16 = e}}$$

2. 
$$\begin{array}{r} \text{A B B} \\ \times \quad \text{B A} \\ \hline \cdot \cdot \cdot \cdot \\ + 1775 \\ \hline \text{C D D C B} \end{array}$$

$C + D = ?$

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

Öyleyse  $C=1$   $D=8$  dir.

$$\underline{\underline{C+D=9}}$$

4. I.  $6 \infty 3 = 18$

II.  $3 \infty 5 = 46$

III.  $3 \infty 4 = 94$

IV.  $2 \infty 4 = ?$

- A) 57      B) 59      C) 61      D) 63      E) 65

$$(2+4)^2 = 6^2 = 36$$

63



5.  $1427x56y12546656$   
 $x; y = ?$

A) 1;2

**B) 2;3**

C) 3;2

D) 4;3

E) 4;1

$$5^5 = y125$$

$$4^4 = x56 = 256$$

$$3125 = y125$$

6. 2, 5, 6, 31, 24, x, 17, 74

x = ?

A) 12

B) 13

C) 14

D) 15

**E) 16**

$$2+5+6=13 \rightarrow \text{Terisi} \rightarrow 31$$

$$5+6+31=42 \rightarrow \text{Terisi} \rightarrow 24$$

$$6+31+24=61 \rightarrow \text{Terisi} \rightarrow \mathbf{16}$$

7.

x	F	A	T	i	H
F					
A				0	6
T	4				
A		9			
H			8		

F+A+T+i+H=?

1 3 4 0 2

A) 8

B) 9

**C) 10**

D) 11

E) 12

$$A \times A = 9 \Rightarrow A = 3$$

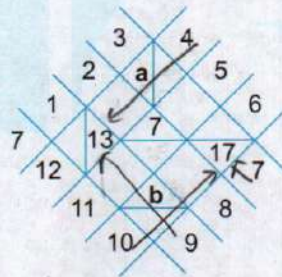
$$i \times A = 0 \Rightarrow i = 0$$

$$A \times H = 6 \Rightarrow 3 \times H = 6 \Rightarrow H = 2$$

$$H \times T = 8 \Rightarrow 2 \times T = 8 \Rightarrow T = 4$$

$$F = 1$$

8.



$$a - b = ? \quad 15 - 7 = 8$$

A) 9

**B) 8**

C) 7

D) 6

E) 5

$$4 + 9 = 13$$

$$\boxed{12 \times 3 = a} \rightarrow a = 15$$

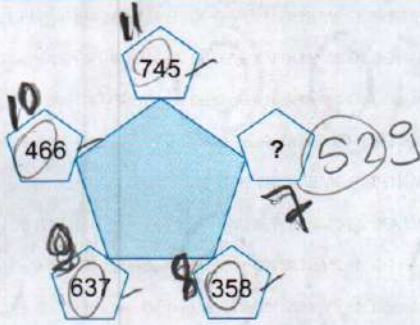
$$10 \times 7 = 70$$

$$2 \times 5 = 7$$

$$\boxed{1 \times 6 = b} \rightarrow b = 7$$



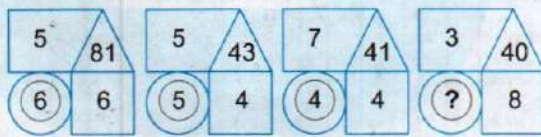
9.



- A) 689      B) 592      C) 952  
D) 259      E) 529

İlk iki rakam toplamları,  
ritmik ilerlemektedir. Buna göre  
Dve E şikeli hariis elenir.  
Son iki basamak toplamı 11  
olması gerektğinden D şikeli  
da elenir.

10.



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

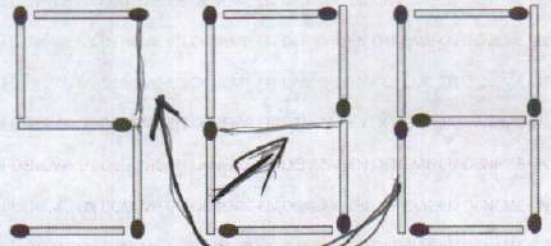
$$\begin{array}{l|l|l} 5 \cdot 6 = 30 & 5 \cdot 4 = 20 & 7 \cdot 4 = 28 \\ 81 - 30 = 51 & 43 - 20 = 23 & 41 - 28 = 13 \\ 5 + 1 = 6 & 2 + 3 = 5 & 1 + 3 = 4 \end{array}$$

$$\Rightarrow 3 \cdot 8 = 24$$

$$40 - 24 = 16$$

$$1 + 6 = 7 //$$

11.



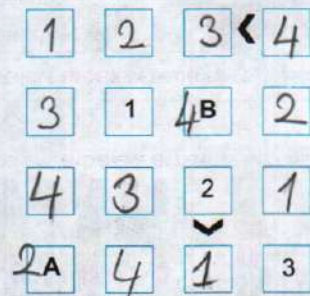
Yukarıda verilen sayıda iki kibrit çöpünün yeri değiştirilerek elde edilecek en büyük sayı kaçtır?

What is the biggest number we get by changing two matchsticks in the number given above?

- A) 999      B) 998      C) 989  
D) 988      E) 986

4 şekilde gösterilen kibrit çöpleri yer değiştirildiğinde 999 olur.

12.



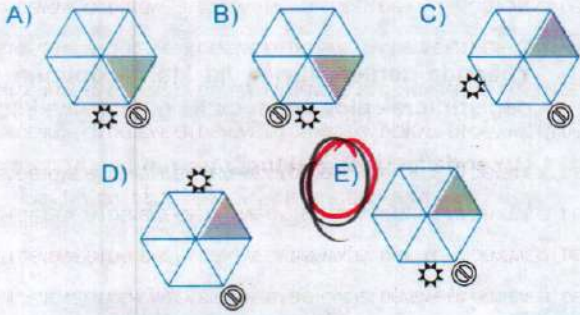
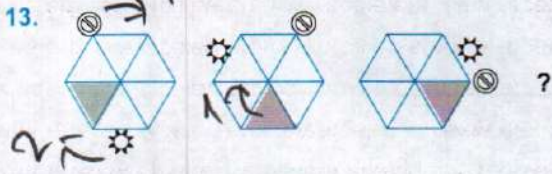
Yukarıda verilen Futoshi bulmacasında 1-2-3-4 rakamları satır ve sütunlarda yalnızca bir defa kullanılıp "Büyüktür" (>) ve "Küçüktür" (<) kuralına uygun doldurulduğunda  $x + y = ?$

What is  $x + y = ?$  when we use 1-2-3-4 only once in rows and columns in the Futoshi puzzle given above respecting the rules of "greater-than sign (>)" and "less-than sign (<)"?

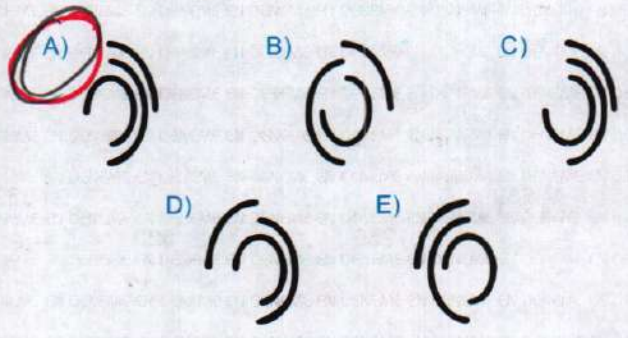
- A) 9      B) 7      C) 8      D) 6      E) 5

$$x + y = A + B = 2 + 4 = 6 //$$

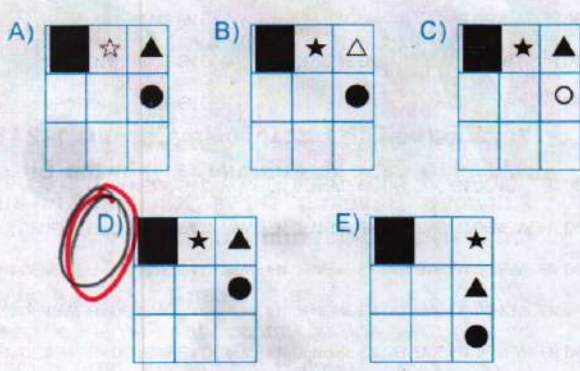
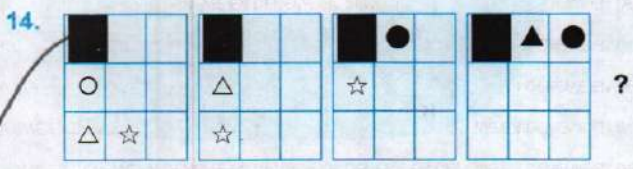




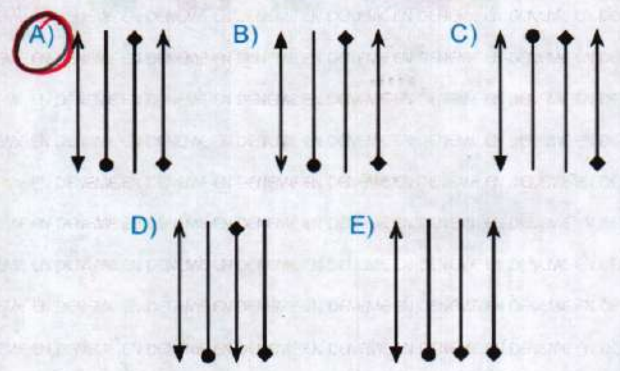
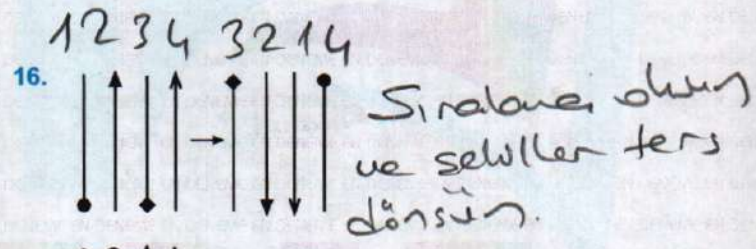
\* Ok yönünde yer değiştirme yapıldığında E seçki elde edilir



\* Ok yönünde dönüşler yapılmaktadır.

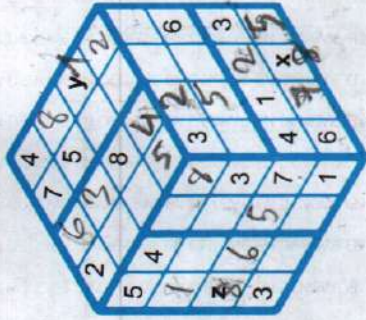


\* İca jiren selul sıyeh olavde renk deęstiryer





17.



$$\begin{aligned} Z &= 8 \\ X &= 8 \\ y &= 1 \end{aligned}$$

$x + y + z = ?$

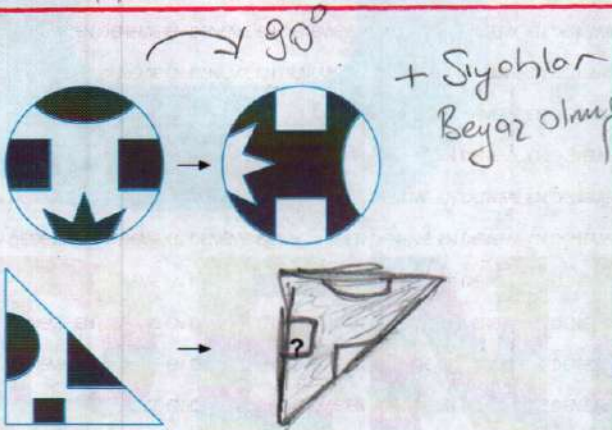
- A) 10    B) 15    **C) 17**    D) 13    E) 19

Su doku mantığıyla sayılar yerleştirildiğinde

$$\begin{aligned} x &\rightarrow 8 \\ y &\rightarrow 1 \\ z &\rightarrow 8 \\ \hline &17 \end{aligned}$$

bulunur.

18.



- A)    **B)**
- C)    D)
- E)

19.

	10	12	23
10	1	3	6
24	7	8	9
11	2	1	8

Yukarıda verilen Kakuro oyununda satır ve sütundaki rakamlar yerleştirildiğinde  $m + t = ?$

What is  $m + t = ?$  when you put the numbers in rows and columns in the Kakuro game?

- A) 6    B) 7    C) 8    D) 9    **E) 10**

$$m + t = 2 + 8 = 10$$

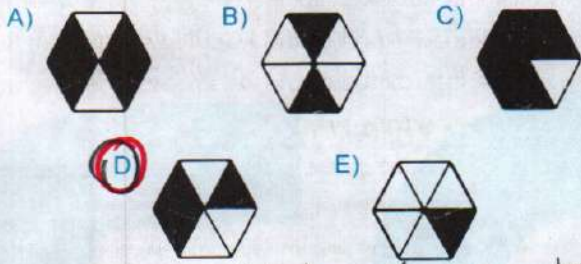
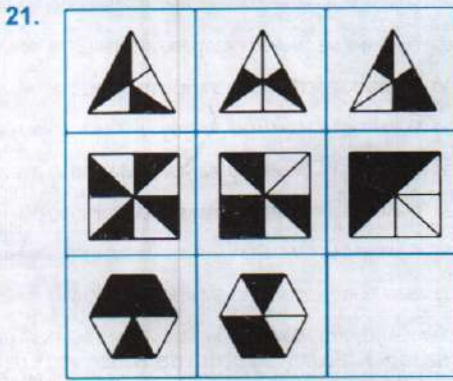
Kural: 1'den 9'a kadar sayılar yazılır.  
: Toplam içerisinde aynı rakam iki kez yazılmaz

20.

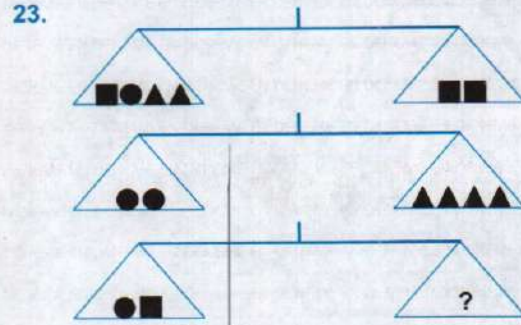
	I	II	III	
				K = ?
				L = ?
				M = ?

- A)    B)    **D)**
- C)    E)



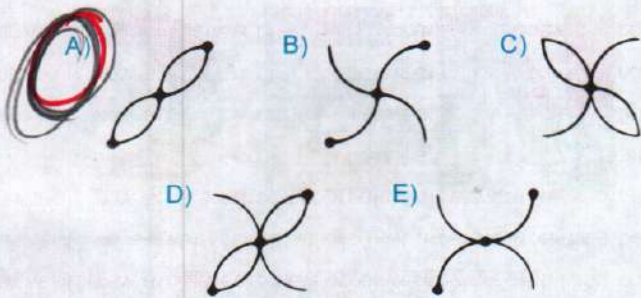


Aynı renkler üst üste gelince beyaz olup.

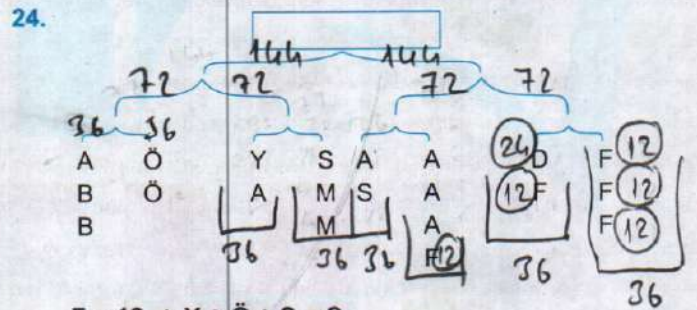


- A) B) C) D) E)

$OO = \Delta\Delta\Delta\Delta \Rightarrow O = \Delta\Delta$   
 $\square\Delta\Delta\Delta\Delta = \square\square \Rightarrow \square = \Delta\Delta\Delta\Delta$   
 $O\square = \Delta\Delta\Delta\Delta\Delta\Delta$



Ekörk parça A içindedir.



$F = 12 \Rightarrow Y + \ddot{O} + S = ?$   
 $28 + 18 + 28 =$

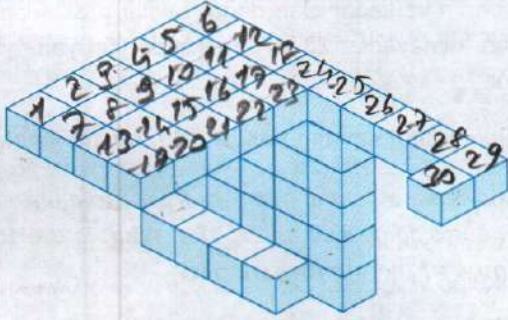
- A) 73 B) 74 C) 75 D) 76 E) 77

$F \rightarrow 12$   
 $D \rightarrow 24$   
 $A \rightarrow 8$   
 $Y \rightarrow 28$   
 $S \rightarrow 28$

$3A = 36 - 12$   
 $A = 8$   
 $Y + A = 36$   
 $Y = 36 - 8$   
 $Y = 28$   
 $2\ddot{O} = 36$   
 $\ddot{O} = 18$   
 $A + S = 36$   
 $\downarrow \downarrow$   
 $8 \ 28$



25.

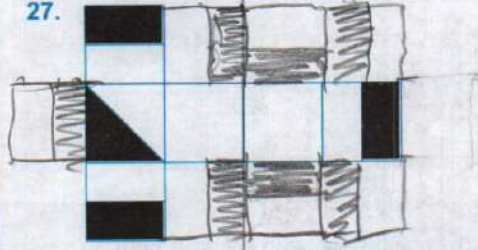


Şekle tepeden bakan biri kaç tane küp görür?

How many cubes can one see when he looks at the figure in the bird's-eye view?

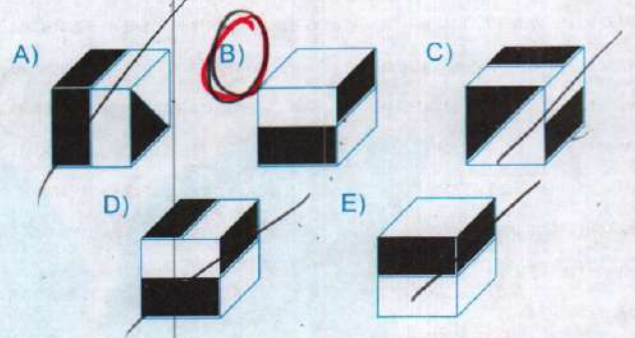
- A) 27 B) 29 C) 30 D) 60 E) 64

27.



Aşağıdakilerden hangisi küpün kapalı halidir?

Which one below is the closed version of this cube?



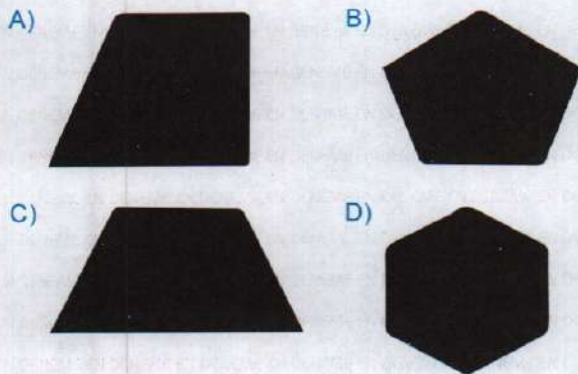
Sorudan anlaşılacağı üzere sadece B şiketi olabilir

26.

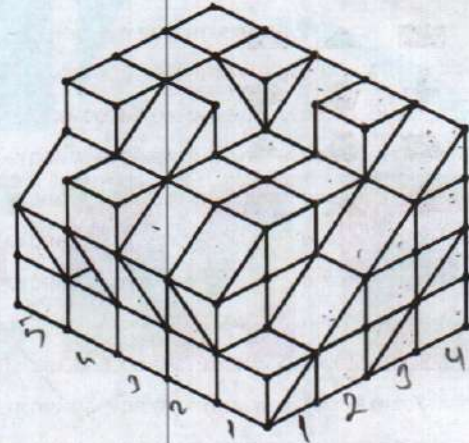


Şekildeki tangram parçalarının birleştirilmiş hali aşağıdakilerden hangisidir?

Which one below is the combined version of the separate tangram pieces above?



28.



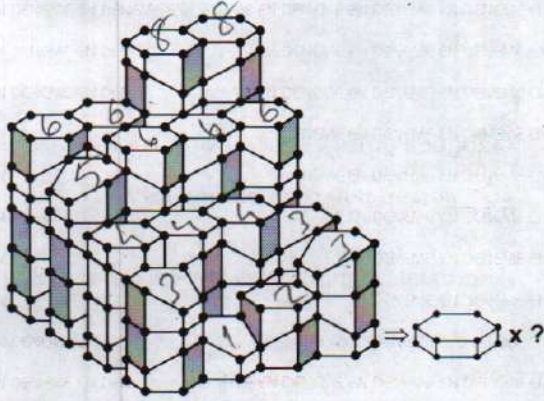
Şekilde kaç tane tuğla vardır?

How many bricks are there in the figure?

- A) 120 B) 121 C) 122 D) 123 E) 124



29.



- A) 75 B) 76 C) 77 D) 78 E) 79

31. 1'den n'ye kadar olan doğal sayılar arasından tam kare olmayanlar 23567... şeklinde yan yana yazılıyor.

Elde edilen sayının baştan 109. rakam kaçtır?

Non-Square natural numbers from 1 to n are written side by side as 23567... What is the 109<sup>th</sup> figure of the number we get?

- A) 0 B) 5 C) 6 D) 3 E) 7

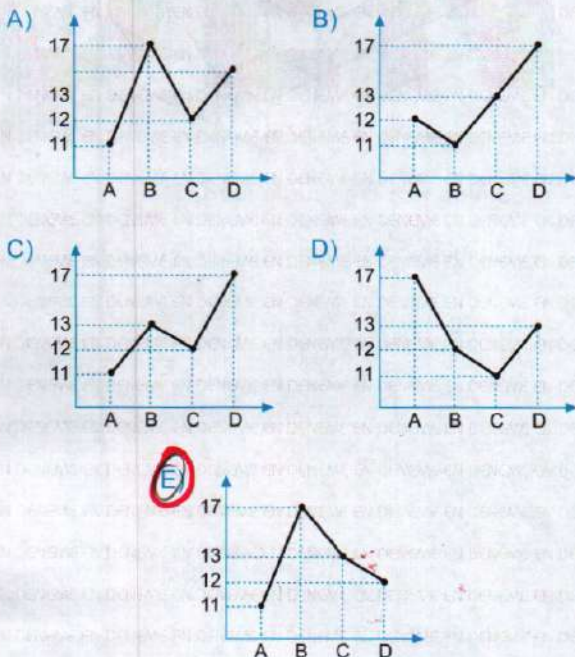
1 4 9 16 25 36 49 → 11

123... 9 10 11 12 ... 60 61 62 63  
 9 100 100  
 64 65 6  
 11

Kenen sayıları toplandı almış.

30.

X	■	▲	▭	11
Y	+	⬠	●	12
Z	▭	⬠	▲	13
T	⬠	▲	▭	12



32.  $\frac{x, \overline{x+0}, \overline{xx}}{0, \overline{x-x}, \overline{0x}} = ?$

- A)  $-\frac{110}{81}$  B)  $-\frac{11}{90}$  C)  $-\frac{1}{9}$   
 D)  $\frac{11}{90}$  E)  $\frac{110}{81}$

$x, \overline{x} = \frac{xx - x}{9} = \frac{x0}{9}$   $0, \overline{xx} = \frac{xx}{99}$   
 $0, \overline{x} = \frac{x}{9}$   $x, \overline{0x} = \frac{0x - x0}{90}$   
 $\frac{\frac{10}{9} + \frac{11}{99}}{\frac{1}{9} - \frac{91}{90}} = \frac{\frac{110+11}{99}}{\frac{-81}{90}} = \frac{121}{99} \cdot \frac{10}{-81} = \frac{11}{-81}$



0202020

33.  $(201)_{10} = (abcd)_4 \Rightarrow a + b + c + d = ? = 6$

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

$$\begin{array}{r} 201 \overline{) 4} \\ \underline{200} \\ 1 \end{array} \quad \begin{array}{r} 50 \overline{) 4} \\ \underline{48} \\ 2 \end{array} \quad \begin{array}{r} 12 \overline{) 4} \\ \underline{12} \\ 0 \end{array} \quad \begin{array}{r} 3 \end{array}$$

①      ②      ③

$201 = (3021)_4$

$3+0+2+1=6$

35.  $x = \frac{2}{7} + \frac{4}{5} - \frac{1}{3} \Rightarrow 2x = \frac{4}{7} + \frac{8}{5} - \frac{2}{3}$

olduğuna göre,  $\frac{3}{7} + \frac{2}{5} + \frac{2}{3}$  toplamının x türünden eşiti aşağıdakilerden hangisidir?

If  $x = \frac{2}{7} + \frac{4}{5} - \frac{1}{3}$ , what is the sum of  $\frac{3}{7} + \frac{2}{5} + \frac{2}{3}$

in x?

- A) 3 - 2x**      B) 2 - 2x      C) 1 - 2x  
D) 3 - x      E) 2 - x

T.T.T

$$\begin{aligned} ? &= \frac{3}{7} + \frac{2}{5} + \frac{2}{3} \\ 2x &= \frac{4}{7} + \frac{8}{5} - \frac{2}{3} \\ + & \\ ? + 2x &= \frac{7}{7} + \frac{10}{5} \Rightarrow ? + 2x = 3 \\ &\Rightarrow ? = -2x + 3 \end{aligned}$$

020902

34.  $\begin{cases} 3x + y = 9 \\ 2x - 3y = -5 \end{cases} \Rightarrow (x, y) = (?, ?) = (2, 3)$

- A) (-1, 2)      B) (1, -2)      C) (-2, -3)  
**D) (2, 3)**      E) (2, -5)

$$\begin{aligned} 9x + 3y &= 27 \\ + 2x - 3y &= -5 \\ \hline 11x &= 22 \Rightarrow x = 2 \\ 3 \cdot 2 + y &= 9 \Rightarrow y = 3 \\ (x, y) &= (2, 3) \end{aligned}$$

020801

36.  $\begin{cases} y - 2x = 5 \\ 2z + y = 8 \end{cases} \Rightarrow 2xy + 4xz - y^2 - 2zy = ?$

- A) 40      B) 30      C) -20      D) -30      **E) -40**

$$\begin{aligned} &= 2xy - y^2 + 4xz - 2zy \\ &= y(2x - y) + 2z(2x - y) \\ &= (2x - y)(y + 2z) \\ &= (-5) \cdot 8 \\ &= -40 \end{aligned}$$



02/1002  
 37.  $(2x - 3y) \in Z$   
 $-3 < x \leq 5$   
 $-2 < y < 3$   
 $\Rightarrow \max(2x - 3y) = ?$   
 A) 17 B) 16 C) 15 D) 14 E) 13

$-6 < 2x \leq 10$   
 $-9 < -3y < 6$   
 $\hline$   
 $-15 < 2x - 3y < 16$   
 $\swarrow \searrow$   
 $\min: -14 \quad \rightarrow \quad \max: (15)$

02/604  
 39.

$f(4) = 0 \Rightarrow f^{-1}(0) = 4$   
 $f(0) = 3 \Rightarrow f^{-1}(3) = 0$   
 $f(2) = 5 \Rightarrow f^{-1}(5) = 2$

$\frac{f(2) - f^{-1}(3)}{(f^{-1}(0))(-4)} = ? = \frac{5 - 0}{(-4)} = -\frac{5}{4}$

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

02/1303  
 38.  $A \neq \emptyset$   
 $B \neq \emptyset$   
 $A \subset B \Rightarrow$

$n(A) = 2x - 5$   
 $n(B) = x + 4$   
 $\Rightarrow \max(n(B)) - \min(n(A)) = ? = 13 - 1 = 12$

A) 13 B) 12 C) 10 D) 14 E) 15

$A \subset B \Rightarrow s(A) \leq s(B)$   
 $\Rightarrow 2x - 5 \leq x + 4$   
 $\Rightarrow \underline{x \leq 9}$

$n(B) = x + 4 \Rightarrow n(B)_{\max} = 9 + 4 = 13$   
 $n(A) = 2x - 5 \Rightarrow n(A)_{\min} = 2 \cdot 3 - 5 = 1$

$2x - 5 > 0$   
 $\Rightarrow \underline{x > 5/2}$

02/202  
 40.  $(p \wedge q) \Rightarrow (r \vee s) \equiv 0 \rightarrow 1 \Rightarrow 0 \equiv 0$  olmal

olduğuna göre p, q, r, s önermelerinin doğruluk değerleri sırasıyla aşağıdakilerden hangisidir?

If  $(p \wedge q) \Rightarrow (r \vee s) \equiv 0$ , what are the truth values of statements "p, q, r, s" respectively?

A) 1, 1, 1, 1 B) 1, 1, 1, 0 C) 1, 0, 1, 0  
 D) 0, 1, 1, 0 E) 0, 0, 0, 1

$p \wedge q \equiv 1$  ise  $p \equiv q \equiv 1$  dir  
 $r \vee s \equiv 0$  ise  $r \equiv s \equiv 0$  dir.  
 $\downarrow$   
 $\underline{r \equiv 1}$

$P, q, r, s \equiv 1, 1, 1, 0$



41.  $A = 18 \cdot 24^x$  sayısının 66 tane pozitif böleni vardır.

Buna göre,  $B = 15 \cdot 6^x$  sayısının kaç tane tam sayı böleni vardır?

$B = 15 \cdot 6^3$

The number  $A = 18 \cdot 24^x$  has 66 positive divisors. According to this data given, how many integer divisors does  $B = 15 \cdot 6^x$  have?

- A) 20    B) 30    C) 40    D) 60    E) 80

$A = 2^{3x+1} \cdot 3^{2x+2} \cdot 2^{3x} \cdot 3^{2x}$   
 $= 2^{6x+1} \cdot 3^{4x+2}$

$PTBS = (3x+1+1) \cdot (4x+2+1) = 66$

$B = 15 \cdot 6^3$

$= 3^1 \cdot 5^1 \cdot 2^3 \cdot 3^3$   
 $= 2^3 \cdot 3^4 \cdot 5^1$

$\Rightarrow T.B.Sayısı = ?$   
 $\Rightarrow T.B.S \leq 2 \cdot (3+1) \cdot (4+1) \cdot (1+1)$   
 $= 2 \cdot 4 \cdot 5 \cdot 2$   
 $= 80$

43.  $A = \{x : |2x - 1| \leq 5, x \in \mathbb{R}\} = [-2, 3]$   
 $B = \{x : -4 \leq x \leq 2, x \in \mathbb{R}\} = [-4, 2]$

olduğuna göre  $(A \times B)$  nin analitik düzlemde meydana getirdiği bölgenin alanı kaç  $br^2$  dir?

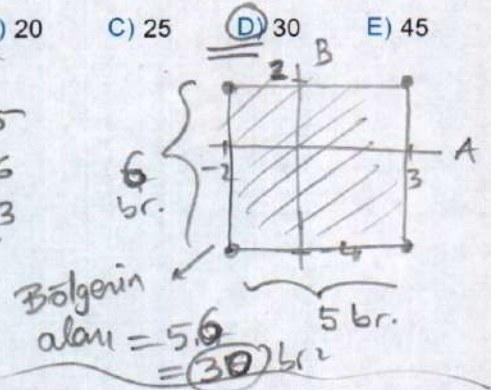
As  $A = \{x : |2x - 1| \leq 5, x \in \mathbb{R}\}$ ,

$B = \{x : -4 \leq x \leq 2, x \in \mathbb{R}\}$

How many square units is the area that " $(A \times B)$ " makes on the coordinate plane?

- A) 40    B) 20    C) 25    D) 30    E) 45

$|2x - 1| \leq 5$   
 $\Rightarrow -5 \leq 2x - 1 \leq 5$   
 $\Rightarrow -4 \leq 2x \leq 6$   
 $\Rightarrow -2 \leq x \leq 3$



Çarkın büyüklüğü ile dişme sayısı ters orantılıdır. Küçük çark çok dönerken, büyük daha az döner.

42. Birbirini çeviren üç dişli çarktan birincisi 3 devir yaptığında ikincisi 4 devir, üçüncüsü 5 devir yapmaktadır.

Bu üç çarktaki toplam dişli sayısı 470 olduğuna göre, en büyük çarktaki dişli sayısı kaçtır?

When one of three gear wheels, which rotate together with each other, rotates for three rounds; second one rotates for four rounds and third one rotates for five rounds. As total number of cogs is 470, what is the number of the cogs is in the biggest gear wheel?

- A) 200    B) 180    C) 150    D) 120    E) 100

$a, b, c$  dişli sayıları,

$3a = 4b = 5c = 60k$

$20k \quad 15k \quad 12k \rightarrow a + b + c = 470$   
 $\Rightarrow 20k + 15k + 12k = 470$   
 $\Rightarrow 47k = 470$   
 $\Rightarrow k = 10$

$b = 150$  dişli

$c = 120$  dişli  $\rightarrow$  en büyük çark 200 dişli vardır

44.  $\left[ -\left(-\frac{1}{2}\right)^2 \right]^{-3} = ?$  (-) Tek = (-)

- A)  $2^{-6}$     B)  $-2^{-6}$     C)  $-2^6$     D)  $-4^{-6}$     E)  $4^{-6}$

$= - \cdot \left(\frac{1}{2}\right)^{2 \cdot (-3)}$   
 $= - \cdot \left(\frac{1}{2}\right)^{-6}$   
 $= -2^6$



DENEME-2

T.T.G :  $\log_3 5 \cdot \log_5 7 = \log_3 7 = x \cdot y$   
 YÖS / TÖBT

022902  
 45.  $Z = x + iy \Rightarrow \bar{Z} = x - iy ; i^2 = -1$   
 $iZ - 2 = 2\bar{Z} - 3i + 1 \Rightarrow \text{Re}(Z) - \text{Im}(\bar{Z}) = ?$   
 $\bar{Z} = x - iy$   
 $i(x + iy) - 2 = 2(x - iy) - 3i + 1$   
 $\Rightarrow ix - y - 2 = 2x - 2iy - 3i + 1$   
 $\Rightarrow -y - 2 + ix = 2x + 1 - 2iy - 3i$   
 $\Rightarrow -y - 2 = 2x + 1$        $x = -2y - 3$   
 $2x + y = -3$   
 $x + 2y = -3$   
 $3(x + y) = -6 \Rightarrow x + y = -2$   
 $x + x + y = -3$   
 $\Rightarrow x = -1$   
 $y = -1$   
 $\Rightarrow z = x + iy ; \bar{z} = x - iy$   
 $\Rightarrow z = -1 - i ; \bar{z} = -1 + i$

023005  
 47.  $\log_3 5 = x, \log_5 7 = y \Rightarrow \log_{21} \left( \frac{147}{35} \right) = ?$        $147 = 3 \cdot 7^2$   
 $\frac{147}{35} = \frac{21}{5}$   
 A)  $\frac{1+xy+x}{1-xy}$       B)  $\frac{1-x-y}{x+y}$       C)  $\frac{xy-1+x}{y-x}$   
 D)  $\frac{1+xy-x}{1+xy}$       E)  $\frac{x-1-xy}{xy-1}$   
 $\log_{21} \left( \frac{147}{35} \right) = \log_{21} \left( \frac{21}{5} \right) = \log_{21} 21 - \log_{21} 5$   
 $= 1 - \frac{\log_3 5}{\log_3 21} = 1 - \frac{x}{1 + \log_3 7} = 1 - \frac{x}{1 + xy}$   
 $\log_3 3 + \log_3 7$

023001  
 46.  $f(x) = e^{\log_2(5x-1)} \Rightarrow f^{-1}(x) = ?$   
 A)  $\frac{e^{\log_2 x} + 1}{5}$       B)  $\frac{2^{\ln x} + 1}{5}$       C)  $\frac{e^{\log_2 x} - 1}{5}$   
 D)  $\frac{2^{\ln x + 1}}{5}$       E)  $\frac{e^{\log_2 x + 1}}{5}$   
 $y = e^{\log_2(5x-1)}$   
 $x = e^{\log_2(5y-1)}$   
 $\Rightarrow \ln x = \ln e^{\log_2(5y-1)}$   
 $\Rightarrow \log_2 \ln x = \log_2(5y-1)$   
 $\Rightarrow 2^{\log_2 \ln x} = 5y - 1$   
 $\Rightarrow y = \frac{1 + 2^{\log_2 \ln x}}{5} = f^{-1}(x)$

02240305  
 48.  $P(x) = x^2 - 2x - 15$        $Q(x) = x + 3$        $R(x) = x - 5$   
 $\frac{P(x)}{2x+a} = \frac{Q(x)}{-2} = \frac{R(x)}{?}$   
 $P(x) = (x-5)(x+3) \cdot Q(x) + 2x + a$   
 $\Rightarrow P(-3) = 0 + 2 \cdot (-3) + a = -2 \Rightarrow a = 4$   
 $P(x) = (x-5) \cdot (x+3) \cdot Q(x) + 2x + 4$   
 $\Rightarrow P(5) = 2 \cdot (5) + 4 = 14$



DENEME-2

YÖS / TÖBT

49.  $x \in \mathbb{R}$ ,  
020806

$$(x^2 + x)^2 + 3 \cdot (x^2 + x) - 10 = 0 \Rightarrow \Sigma x = ?$$

- A) -2 B) -1 C) 0 D) 1 E) 3

$$t^2 + 3t - 10 = 0 \rightarrow \begin{cases} t_1 = -5 \\ t_2 = 2 \end{cases} = x^2 + x$$

$$x^2 + x + 5 = 0$$

$$x^2 + x - 2 = 0$$

$$x_1 + x_2 = (-1)$$

$$x_3 + x_4 = (-1)$$

$$\Sigma x = x_1 + x_2 + x_3 + x_4 = -1 - 1 = (-2)$$

$\cos 75 < \sin 75$  old. dan

022815  $\frac{1}{\cos 75} > \frac{1}{\sin 75}$

50.  $\sec 75 - \operatorname{cosec} 75 = ?$

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

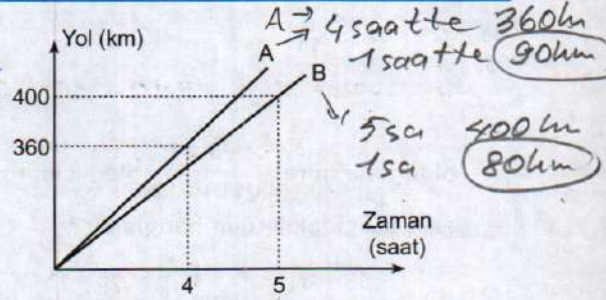
$$\frac{1}{\cos 75} - \frac{1}{\sin 75} = \frac{\sin 75 - \cos 75}{\sin 75 \cos 75} = \frac{\frac{\sqrt{2}}{2}}{\frac{1}{2} \cdot \frac{1}{2}} = \frac{\sqrt{2}}{2} \cdot 2 = \sqrt{2}$$

$\sin 150 = \frac{1}{2}$

$$\begin{aligned} (\sin 75 - \cos 75)^2 &= \sin^2 75 + \cos^2 75 - 2 \sin 75 \cos 75 \\ &= 1 - \sin 150 \\ &= 1 - \frac{1}{2} \\ &= \frac{1}{2} \\ \Rightarrow \sin 75 - \cos 75 &= \left(\frac{\sqrt{2}}{2}\right) \end{aligned}$$

51.

022307



Yukarıdaki grafikte A ve B araçlarının aldıkları yolun zamana göre değişimi gösterilmiştir.

Buna göre, aynı anda ve aynı noktadan aynı yöne doğru harekete başlayan bu araçlardan A aracının 8 saatte vardığı yere B aracı kaç saatte varır?

A (8 saatte) B (9 saatte)  
 $8 \times 90 = 720 \text{ km}$   $720 / 80 = 9$

In the graph above, the change in the distance "A" and "B" covered over time is shown. According to the data given, when both cars start driving at the same time, at the same point and in the same direction; in how many hours does "B" car arrive at the place where "A" car arrives in 8 hours?

- A) 6,5 B) 10 C) 7,5 D) 9 E) 9,5

02280102

52.  $A \in \mathbb{Z}$

$$A = \frac{4 - 5 \cos 2x}{2} \Rightarrow \max(A) - \min(A) = ? \quad 4 - 0 = 4$$

- A) -2 B) -1 C) 2 D) 3 E) 4

$$\begin{aligned} -1 &< \cos 2x \leq 1 \\ -5 &\geq -5 \cos 2x \geq -5 \\ +4 &\geq 4 - 5 \cos 2x \geq -1 \\ \frac{1}{2} &\geq \frac{4 - 5 \cos 2x}{2} \geq -\frac{1}{2} \end{aligned}$$

$$\Rightarrow -\frac{1}{2} \leq A \leq \frac{9}{2}$$

$A_{\min} = 0$ ,  $A_{\max} = 4$



020709

53.  $x = \frac{\sqrt{13} - \sqrt{11}}{\sqrt{5} - 1}$  ? =  $\frac{\sqrt{5} + 1}{\sqrt{13} + \sqrt{11}}$  (T.T.B)

olduğuna göre,  $\frac{\sqrt{5} + 1}{\sqrt{11} + \sqrt{13}}$  ifadesinin x türünden eşiti aşağıdakilerden hangisidir?

If  $x = \frac{\sqrt{13} - \sqrt{11}}{\sqrt{5} - 1}$ , what is  $\frac{\sqrt{5} + 1}{\sqrt{11} + \sqrt{13}}$  in "x"?

- A)  $-2x$  B)  $-\frac{x}{2}$  C)  $x$  D)  $x + 2$  E)  $2x$

$\frac{?}{x} = \frac{\sqrt{5} + 1}{\sqrt{13} + \sqrt{11}} \Rightarrow \frac{?}{\frac{\sqrt{13} - \sqrt{11}}{\sqrt{5} - 1}} = \frac{(\sqrt{5} + 1)(\sqrt{5} - 1)}{(\sqrt{13} + \sqrt{11})(\sqrt{13} - \sqrt{11})}$   
 $\Rightarrow \frac{?}{x} = \frac{5 - 1}{13 - 11} = \frac{4}{2} = 2 \Rightarrow ? = 2x$

0306

55.  $(a_n)$  aritmetik bir dizidir.

$a_4 + a_5 + a_6 + a_7 + a_8 = 40 \Rightarrow 2a_6 + 2a_6 + 2a_6 = 40$   
 $5a_6 = 40 \Rightarrow a_6 = 8$

$a_{15} - a_{10} = 20 \Rightarrow a_1 + a_2 + a_3 + \dots + a_{20} = ?$

- A) 520 B) 530 C) 540 D) 550 E) 555

$S_{20} = ?$   
 $2a_{10} + 5r = 2a_{10} = 20 \Rightarrow 5r = 20 \Rightarrow r = 4$   
 $S_{20} = \frac{20}{2} \cdot [2a_1 + 20r] = 10 \cdot [2a_1 + 80]$   
 $2a_{20} = 2a_6 + 14r = 8 + 14 \cdot 4 = 64$   
 $2a_6 = 2a_1 + 5r \Rightarrow 8 = 2a_1 + 20 \Rightarrow 2a_1 = -12$

02240301

54.  $P(x) = x^2 - 2x + b$   
 $Q(x) = ax^2 + cx + 4$   
 $4P(x) = 3Q(x)$

olduğuna göre  $a + b - c = ?$

If  $P(x) = x^2 - 2x + b$   
 $Q(x) = ax^2 + cx + 4$   
 $4P(x) = 3Q(x)$

what is  $a + b - c = ? = \frac{5}{3}$

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

$4(x^2 - 2x + b) = 3(ax^2 + cx + 4)$   
 $\Rightarrow 4x^2 - 8x + 4b = 3ax^2 + 3cx + 12$   
 $\Rightarrow 3a = 4 \quad \wedge \quad -8 = 3c \quad \wedge \quad 4b = 12$   
 $\Rightarrow a = \frac{4}{3} \quad \wedge \quad c = -\frac{8}{3} \quad \wedge \quad b = 3$   
 $a + b - c = \frac{4}{3} - \frac{8}{3} + 3 = \frac{-4}{3} + 3 = \frac{5}{3}$

021804

56. Bugün günlerden Cumartesi ve saat 21.40 olduğuna göre, 242 saat sonra günlerden hangi gün ve saat kaç olur?

Today is Saturday and it is 21.40. What day and time is it after 242 hours?

- A) Salı, 23.40  
 B) Çarşamba, 23.40  
 C) Perşembe, 20.40  
 D) Cuma, 21.40  
 E) Cumartesi, 21.40

$1 \text{ gün } 24 \text{ saat}$   
 $242 \begin{array}{r} 24 \\ \underline{10} \end{array}$   
 $2 \text{ saat artı}$   
 $10 \begin{array}{r} 7 \\ \underline{1} \end{array}$   
 $3 \text{ gün artı}$

Ctesi Pz Ptesi Salı  
 0 1 2 3  
 $21.40 \text{ s.}$   
 $+ 02.00 \text{ s.}$   
 $\underline{\hspace{1cm}}$   
 $23.40 \text{ s.}$



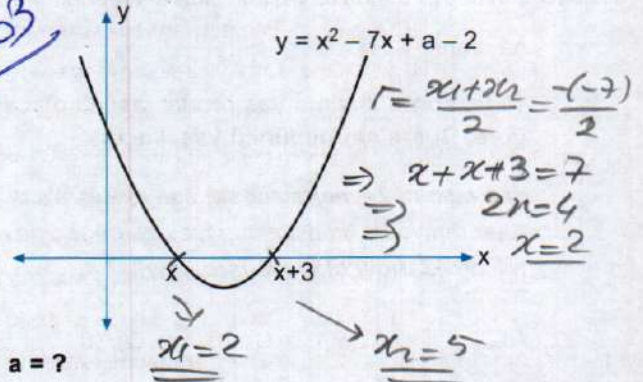
021603

57.  $(g \circ f^{-1})(x) = \frac{2x+1}{3} \Rightarrow g(2x+2) = \frac{2x+1}{3}$   
 $f(x) = \frac{x-2}{2}$   
 olarak veriliyor.  $\Rightarrow f^{-1}(u) = 2x+2$   
 Buna göre,  $g(2)$  kaç eşittir?

According to the data given, what does  $g(2)$  equal to?

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

022703



- A) -5 B) -1 C) 6 D) 10 E) 12
- $x_1 \cdot x_2 = \frac{a-2}{1} \Rightarrow 2 \cdot 5 = a-2$   
 $\Rightarrow 10 = a-2$   
 $\Rightarrow a = 12$

023007

58.  $A \in \mathbb{R}, x \in \mathbb{Z}$   
 $A = \sqrt{2 - \log_2(x-2)} \Rightarrow \sum x = ?$

- A) 14 B) 15 C) 17 D) 18 E) 20

$x-2 > 0 \Rightarrow x > 2$   
 $2 - \log_2(x-2) \geq 0$   
 $\Rightarrow 2 \geq \log_2(x-2)$   
 $\Rightarrow \log_2^2 \geq \log_2(x-2)$   
 $\Rightarrow 4 \geq x-2$   
 $\Rightarrow 6 \geq x$

$2 < x \leq 6$   
 $\downarrow$   
 $3, 4, 5, 6 \rightarrow \sum x = 3+4+5+6 = 18$

02340702

60.  $\lim_{x \rightarrow \infty} \frac{(a-3)x^3 - (b-1)x^2 + 3x - 2}{(2b+3)x^2 - 2x + 1} = \frac{2}{3}$  sonucu

- $a - b = ?$   
 A) 8 B) 10 C) 12 D) 13 E) 15

$\frac{-(b-1)}{2b+3} = -\frac{2}{3}$   
 $\Rightarrow 3b-3 = 4b+6$   
 $\Rightarrow -9 = b$   
 $a-b = 3 - (-9) = 12$



**DENEME-2**

$(2x-3) \cdot f'(x^2-3x+1) = 2g'(2x+1)$   
 $x=-2 \rightarrow (-7) \cdot f'(-3) = 2g'(-3)$  **YÖS / TÖBT**

022303

61. Zeynep'in bugünkü yaşının Büşra'nın bugünkü yaşına oranı  $\frac{6}{5}$ 'tir.

10 yıl sonra ikisinin yaş ortalaması 43 olacağına göre, Büşra'nın bugünkü yaşı kaçtır?

The ratio of Zeynep's current age to Büşra's is  $\frac{6}{5}$ . After ten years, considering their average age will be 43, how old is Büşra now?

- A) 20    B) 25    C) 28    **D) 30**    E) 35

$\frac{Z}{B} = \frac{6}{5} = \frac{6k}{5k}$

10 yıl sonra  
 $Z = 6k + 10$   
 $B = 5k + 10$

ortalama:  $\frac{Z+B}{2} = \frac{6k+10+5k+10}{2} = 43$

Büşra = 5k idi  
 $= 5 \cdot 6 = 30$

$11k + 20 = 86$   
 $11k = 66$   
 $k = 6$

0235021

63.  $f: \mathbb{R} \rightarrow \mathbb{R}, g: \mathbb{R} \rightarrow \mathbb{R}$

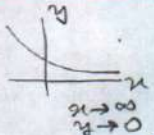
$f(x^2 - 3x + 1) = g(2x + 1) \Rightarrow (f^{-1} \circ g)'(-3) = ?$

- A) -4    **B)  $-\frac{7}{2}$**     C) -5    D) 5    E)  $\frac{7}{2}$

$(f^{-1} \circ g)'(u) = (f^{-1})'(g(u)) \cdot g'(u)$   
 $u = -3$

$= (f^{-1})'(g(-3)) \cdot g'(-3)$   
 $= (f^{-1})'(f(11)) \cdot (-\frac{7}{2} \cdot f'(11))$   
 $= (-\frac{7}{2}) \cdot (f^{-1})'(f(11)) \cdot f'(11)$   
 $= -\frac{7}{2}$

$f(11) = g(-3)$



$\left(\frac{\text{büyük}}{\text{büyük}}\right)^\infty = \left(\frac{\text{büyük}}{\text{büyük}}\right)^\infty \rightarrow 0$

02340702

62.  $\lim_{x \rightarrow \infty} \frac{2e^{-x+1} - 3\pi^{-2x}}{4e^{-x+2} + 5\pi^{-x+1}} = ?$

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

$\lim_{x \rightarrow \infty} \frac{e^{-x} \cdot 2e - 3\pi^2 \cdot (\frac{\pi}{e})^{-x}}{e^{-x} \cdot 4e^2 + 5\pi \cdot (\frac{\pi}{e})^{-x}}$

$\lim_{x \rightarrow \infty} \frac{2e - 3\pi^2 \cdot (\frac{e}{\pi})^x}{4e^2 + 5\pi \cdot (\frac{e}{\pi})^x} \rightarrow \frac{2e}{4e^2} = \frac{1}{2e}$

02350214

64.  $y = x^3 - x^2 + 1$   
 $x = 2u^2 - u - 2 \Rightarrow \frac{dy}{dt} \Big|_{t=1} = ?$   
 $u = 2t^2 - 3t$

- A) 8    B) 5    C) 2    **D) -5**    E) -10

$\frac{dy}{dt} = \frac{dy}{du} \cdot \frac{du}{dt} \cdot \frac{dt}{dt}$

$= (3u^2 - 2u) \cdot (4u - 1) \cdot (4t - 3)$   
 $= (3 \cdot 1 - 2 \cdot 1) \cdot (4 \cdot (-1) - 1) \cdot (4 \cdot 1 - 3)$   
 $= 1 \cdot (-5) \cdot 1 = -5$

$\begin{cases} t=1 \\ u=1 \\ x=1 \end{cases}$   
 $t=1$  için  
 $u = 2 \cdot 1^2 - 3 \cdot 1 = -1$   
 $x = 2u^2 - u - 2$   
 $\hookrightarrow x = 2 \cdot (-1)^2 - (-1) - 2 = 2 + 1 - 2 = 1$

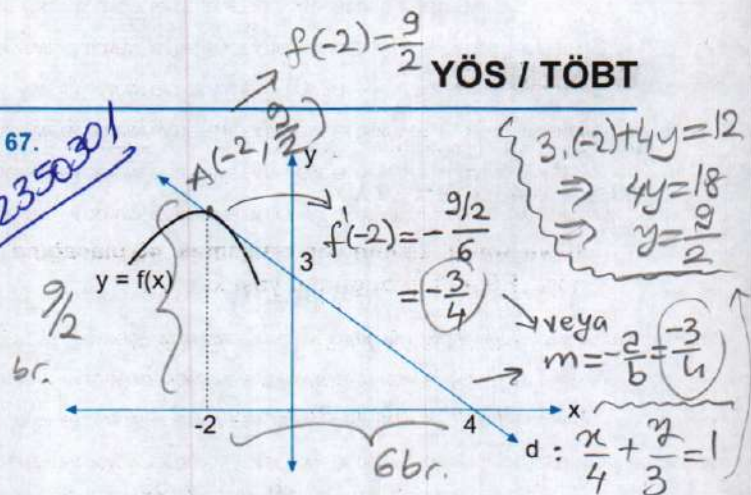


02340707

65.  $\lim_{x \rightarrow 0} x^{\tan x} = ?$   
 A)  $-\infty$  B)  $-1$  C)  $0$  **D)  $1$**  E)  $\infty$

$y = x^{\tan x}$   
 $\ln y = \ln x^{\tan x}$   
 $\Rightarrow \ln y = \tan x \cdot \ln x$   
 $\lim_{x \rightarrow 0} (\ln y) = 0$   
 $\lim_{x \rightarrow 0} \ln y = \lim_{x \rightarrow 0} \ln 1 = 0$   
 $\Rightarrow y = \lim_{x \rightarrow 0} x^{\tan x} = 1$   
 L'H  $\lim_{x \rightarrow 0} \frac{\ln x}{\cot x} \rightarrow \frac{0}{\infty}$   
 $= \lim_{x \rightarrow 0} \frac{1/x}{-1/\sin^2 x} = \lim_{x \rightarrow 0} -\frac{\sin^2 x}{x}$   
 $= (-1) \cdot 0 = 0$

02350301



67.  $g(x) = x^2 \cdot f(x) \Rightarrow g'(-2) = ?$   
 A)  $-15$  B)  $-18$  **C)  $-21$**  D)  $-25$  E)  $-26$

$g'(x) = 2x \cdot f(x) + x^2 \cdot f'(x)$   
 $g'(-2) = 2 \cdot (-2) \cdot f(-2) + (-2)^2 \cdot f'(-2)$   
 $= (-4) \cdot \frac{9}{2} + 4 \cdot (-\frac{3}{4}) = -18 - 3 = -21$

02370202

66.  $A = \begin{bmatrix} 2 & -3 & 1 \\ -2 & x & 1 \\ 0 & -1 & 2 \end{bmatrix}_{3 \times 3}$   
 $|A| = 0$  dimalıdır ki tersi alınmasın

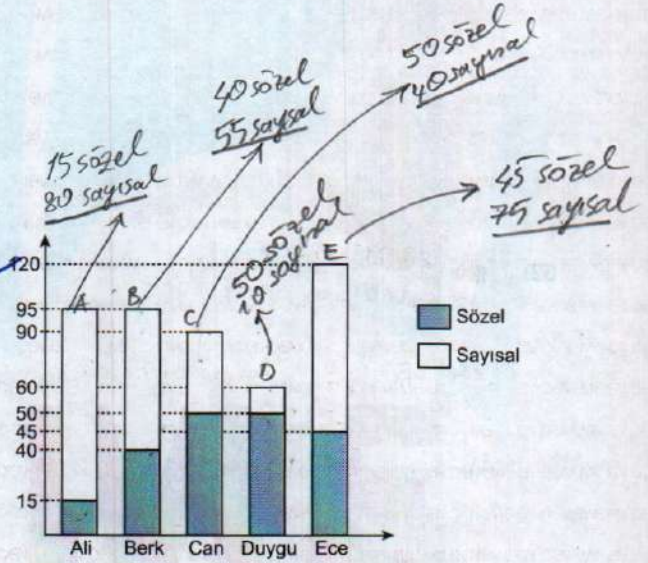
matrisi tersinir **olmadığına** göre x kaçtır?

Considering " $\begin{bmatrix} 2 & -3 & 1 \\ -2 & x & 1 \\ 0 & -1 & 2 \end{bmatrix}_{3 \times 3}$ " matrix is NOT reversible, what is "x"?

A)  $-2$  B)  $-1$  C)  $0$  D)  $1$  **E)  $2$**

$|A| = \begin{vmatrix} 2 & -3 & 1 \\ -2 & x & 1 \\ 0 & -1 & 2 \end{vmatrix} = 0 \rightarrow$  II. satıra göre alalım  
 $= 0 \cdot (-1)^{3+1} \cdot \begin{vmatrix} -3 & 1 \\ x & 1 \end{vmatrix} + (-1) \cdot (-1)^{3+2} \cdot \begin{vmatrix} 2 & 1 \\ -2 & 1 \end{vmatrix} + 2 \cdot (-1)^{3+3} \cdot \begin{vmatrix} 2 & -3 \\ -2 & x \end{vmatrix}$   
 $= 2 \cdot 1 - 1 \cdot (-2) + 2 \cdot (2x - (-2) \cdot (-3)) = 0$   
 $= 2 + 2 + 4x - 12$   
 $= 4x - 8$  ve  $|A| = 0$   
 $\Rightarrow 4x - 8 = 0$   
 $\Rightarrow x = 2$

022301



Yukarıda 80 sayısal, 80 sözel sorudan oluşan bir sınavda Ali, Berk, Can, Duygu ve Ece isimli beş öğrencinin yaptıkları net sayıları birikimli grafik olarak verilmiştir.

Buna göre **sayısal**dan **en az** neti kim yapmıştır?

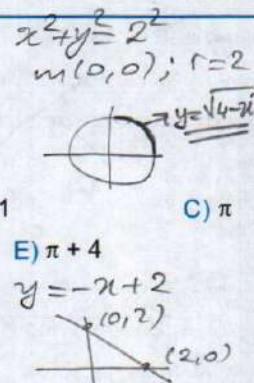
(Sözel: Humanities, Sayısal: Science)  
 Net scores of Ali, Berk, Can, Duygu and Ece on a 80 science and 80 humanities test are shown on a cumulative chart above. According to the data given, **who scored the least on the science test?**  
 A) Ali B) Berk C) Can **D) Duygu** E) Ece



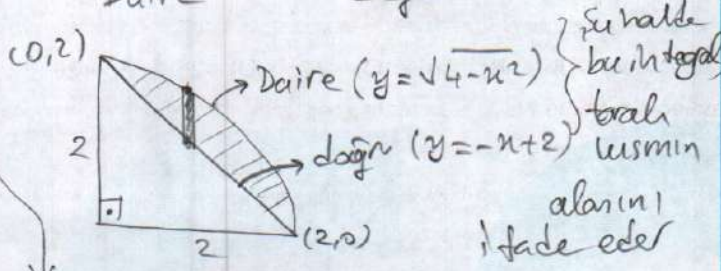
69.  $I = \int_0^2 (\sqrt{4-x^2} + x - 2) dx = ?$

02360302  
A)  $\pi - 2$

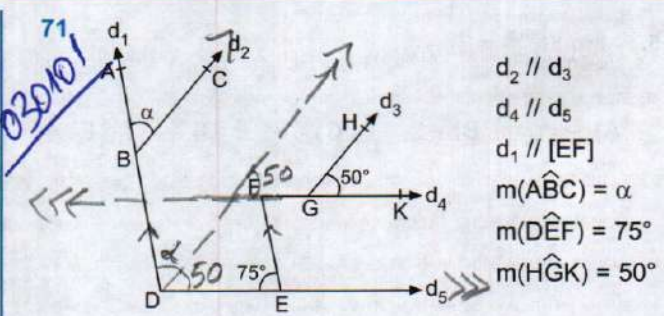
- B)  $\pi - 1$  C)  $\pi$   
D)  $\pi + 2$  E)  $\pi + 4$



$I = \int_0^2 [\sqrt{4-x^2} - (-x+2)] dx$



$= \frac{\pi \cdot 2^2}{4} - \frac{2 \cdot 2}{2} = (\pi - 2) \cdot 612$



Yukarıdaki verilere göre,  $\alpha$  kaç derecedir?

What is the angle of " $\alpha$ " according to data given above?

$\alpha + 50 + 75 = 180$

- A) 45 B) 50 C) 55 D) 60 E) 65

$\Rightarrow \alpha = 55$

02370103  
70.

$A = \begin{bmatrix} -3 & a \\ 1 & b \end{bmatrix}, B = \begin{bmatrix} 2 & 1 \\ c & 3 \end{bmatrix}$

$2A - 3B = \begin{bmatrix} d & 5 \\ -7 & -5 \end{bmatrix} \Rightarrow a + b + c + d = ?$

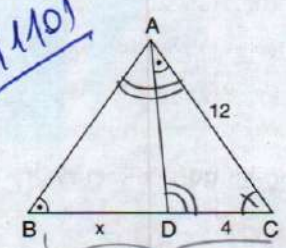
- A) -5 B) -3 C) -1 D) 3 E) 5

$2 \cdot (-3) - 3 \cdot (2) = d \Rightarrow -6 - 6 = d \Rightarrow d = -12$   
 $2 \cdot 2 - 3 \cdot 1 = 5 \Rightarrow 2 \cdot 2 = 8 \Rightarrow 2 = 4$

$2 \cdot 1 - 3 \cdot c = -7 \Rightarrow 2 - 3c = -7 \Rightarrow 9 = 3c \Rightarrow c = 3$   
 $2b - 3 \cdot 3 = -5 \Rightarrow 2b - 9 = -5 \Rightarrow 2b = 4 \Rightarrow b = 2$

$\Rightarrow a + b + c + d = 4 + 2 + 3 - 12 = -3$

72.  
03011101



ABC bir üçgen  
 $m(\widehat{ABC}) = m(\widehat{DAC})$   
 $|AC| = 12 \text{ cm}$   
 $|DC| = 4 \text{ cm}$

olduğuna göre,  $|BD| = x$  kaç cm'dir?

ABC is a triangle,  $m(\widehat{ABC}) = m(\widehat{DAC})$ ,  $|AC| = 12 \text{ cm}$ ,  $|DC| = 4 \text{ cm}$  and how many cm is " $|BD| = x$ " ?

A) 36 B) 32 C) 24 D) 16 E) 8  
 $\triangle ADC \sim \triangle ABC \Rightarrow \frac{|AD|}{|BA|} = \frac{|DC|}{|AC|} = \frac{|AC|}{|BC|}$

$\Rightarrow \frac{4}{12} = \frac{12}{x+4} \Rightarrow x+4 = 36 \Rightarrow x = 32$   
 $k = \frac{1}{3}$  (benzerlik oranı)

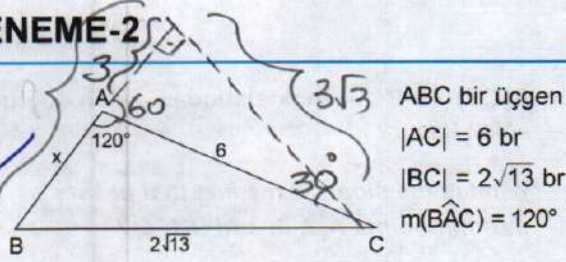


DENEME-2

YÖS / TÖBT

73.

030103



olduğuna göre,  $|AD| = x$  kaç br'dir?

ABC is a triangle,  $|AC| = 6$  units,  $|BC| = 2\sqrt{13}$  units,  $m(\widehat{BAC}) = 120^\circ$  and how many units is  $|AD| = x$  according to data given?

- A) 2 B) 3 C) 4 D) 5 E) 6

$$(x+3)^2 + (3\sqrt{3})^2 = (2\sqrt{13})^2$$

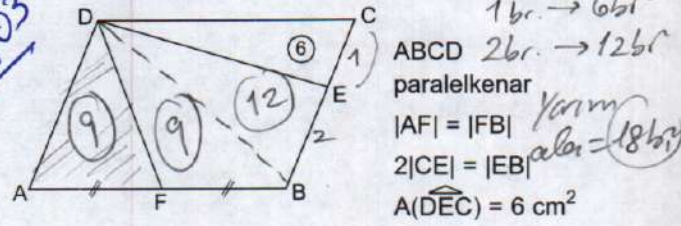
$$\Rightarrow (x+3)^2 = 52 - 27$$

$$\Rightarrow (x+3)^2 = 25 = 5^2$$

$$\Rightarrow x+3 = 5 \Rightarrow \underline{x=2}$$

75.

03020403



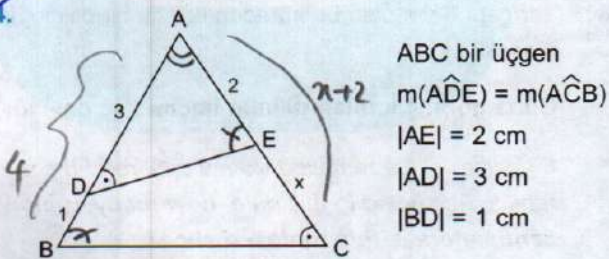
Verilenlere göre,  $A(\widehat{AFD})$  kaç  $cm^2$  dir?

ABCD is a rhomboid and  $|AF| = |FB|$ ,  $2|CE| = |EB|$ ,  $A(\widehat{DEC}) = 6 cm^2$  square cm.

According to data given, how many square cm is  $A(\widehat{AFD})$  ?

- A) 6 B) 8 C) 9 D) 10 E) 12

0301101



Verilenlere göre,  $|EC| = x$  kaç cm'dir?

ABC is a triangle and  $m(\widehat{ADE}) = m(\widehat{ACB})$ ,  $|AE| = 2$  cm,  $|AD| = 3$  cm,  $|BD| = 1$  cm

According to data given, how many cm is  $|EC| = x$  ?

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

$\triangle ADE \sim \triangle ACB$  dir.

$$\Rightarrow \frac{|AD|}{|AC|} = \frac{|DE|}{|CB|} = \frac{|AE|}{|AB|}$$

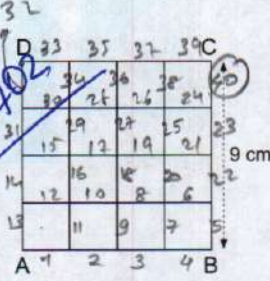
$$\Rightarrow \frac{3}{x+2} = \frac{2}{4}$$

$$\Rightarrow x+2 = 6$$

$$\Rightarrow \underline{x=4}$$

76.

03020702



4x4 küçük karelerin birleşimiyle oluşturulan kare tel ızgaranın bir kenarı 9 cm'dir.

4 br  $\rightarrow$  9 cm  
 40 br  $\rightarrow$  90 cm

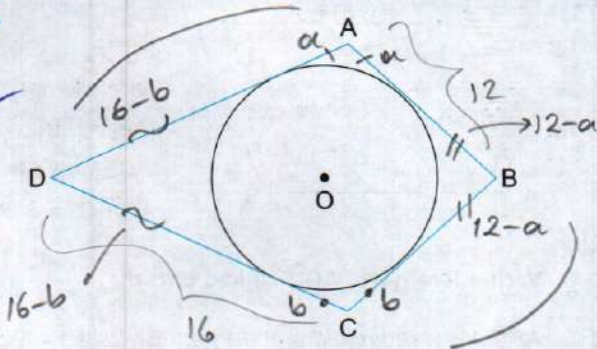
Buna göre, bu ızgaranın yapımı için kaç cm tel kullanılmıştır?

One side of a 4x4 grid is 9 cm long. According to this, how many cm of wire was used to make this grid?

- A) 70 B) 81 C) 90 D) 92 E) 100



77.



ABCD teğetler dörtgenidir.  $|AB| = 12$ ,  $|CD| = 16$

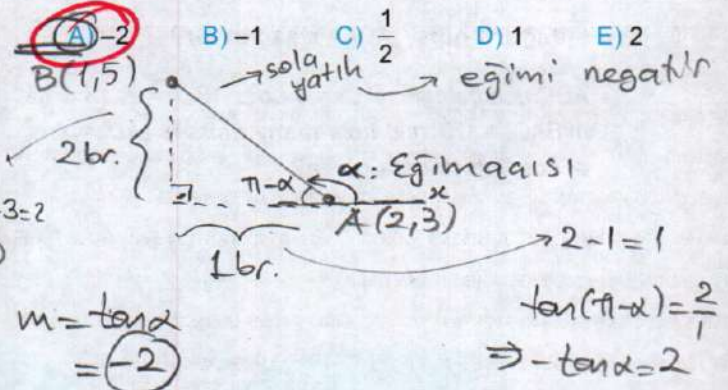
Çevre(ABCD) = ? =  $16 + 12 + 12 - a + b + a + 16 - b$   
=  $(56)$  br.

ABCD is a tangential quadrilateral.  $|AB| = 12$ ,  $|CD| = 16$  and what is the perimeter of (ABCD) ?

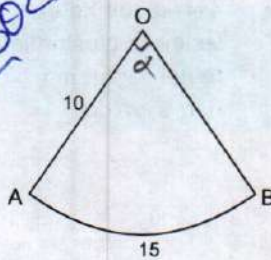
- A) 28    B) 14    C) 27    D) 30    **E) 56**

79. A(2, 3) ve B(1, 5) noktalarından geçen doğrunun eğimi kaçtır?

What is the slope of the line that passes through points A(2, 3) and B(1, 5)?



78.



O, daire diliminin merkezi

$|OA| = 10$  cm

$|\widehat{AB}| = 15$  cm

Verilenlere göre, daire diliminin alanı kaç  $\text{cm}^2$  dir?

"O" is the centre of a circular segment,  $|OA| = 10$  cm and  $|\widehat{AB}| = 15$  cm. According to data given, how many square cm is the area of the circular segment?

- A) 45    B) 60    **C) 75**    D) 90    E) 150

Dilimin alanı:

$$|\widehat{AB}| = 2\pi r \cdot \frac{\alpha}{360}$$

$$\Rightarrow 15 = 2 \cdot \pi \cdot 10 \cdot \frac{\alpha}{360}$$

$$\Rightarrow 15 \cdot 18 = \alpha \cdot \pi$$

$$\Rightarrow \alpha = \frac{15 \cdot 18}{\pi}$$

$$\pi r^2 \cdot \frac{\alpha}{360} = \frac{15 \cdot 18 \cdot 10^2}{360}$$

$$= 15 \cdot 5$$

$$= \mathbf{75} \text{ br.}$$

80. Yarıçapı 6 cm olan bir küreden  $60^\circ$  lik bir dilim çıkarılacaktır.

Buna göre, çıkarılan dilimin hacmi kaç  $\text{cm}^3$  tür?

$60^\circ$  slice will be removed from a sphere of 6 cm radius. According to this data, how many cubic centimeters is this removed slice?

- A)  $36\pi$     **B)  $48\pi$**     C)  $64\pi$     D)  $128\pi$     E)  $196\pi$

$$V = \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \cdot \pi \cdot 6^3 \text{ br}^3$$

Bu hacmin  $\frac{60}{360} = \frac{1}{6}$  lile kısmı soruluyor.

Kürenin hacmidir.

$$V_{\text{dilim}} = \frac{4/3 \cdot \pi \cdot 6^3}{6}$$

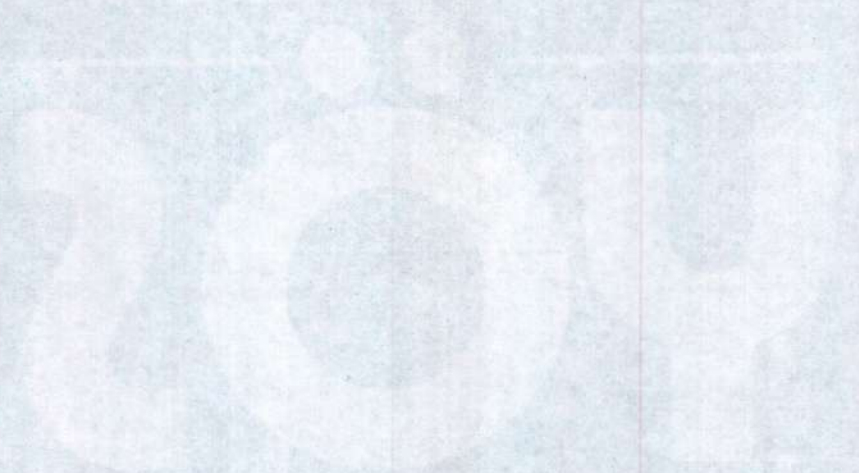
$$= \frac{4}{3} \cdot \pi \cdot 6^2$$

$$= \mathbf{48\pi} \text{ br}^3$$



Handwritten notes in the top right corner, possibly including a date and initials.

1931 1934



1931 1934

Faint text at the bottom of the page, possibly a footer or page number.