Türkiye Matematik Yarışması

7. SINIF

TMY - 230407

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AD SOYAD : .....

OKUL ADI : .....

SINIF : .....

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TMY 2023 1.ASAMA YANIT ANAHTARI

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
3.SINIF	B	C	C	C	D	D	E	E	B	B	B	D	A	D	D	E	C	C	B	D								
4.SINIF	C	E	B	D	D	C	B	D	B	D	D	İpt.	C	E	D	C	C	A	C	C								
5.SINIF	A	C	E	A	C	E	C	C	C	B	E	E	A	E	C	C	D	D	İpt.	A	B	B	D	C				
6.SINIF	D	A	D	C	B	C	B	E	D	C	D	B	E	C	A	B	E	A	D	C	A	D	D	C				
7.SINIF	C	B	D	A	E	A	E	B	B	E	E	D	A	C	D	A	D	E	D	A	D	D	D	E				
8.SINIF	D	B	D	D	B	C	D	D	A	B	D	C	C	E	C	B	D	D	E	B	D	D	D	E				
9.SINIF	E	A	A	E	B	C	A	B	C	C	A	B	B	A	B	C	C	D	E	C	C	D	B	C	D	D	A	B
10.SINIF	E	B	B	C	B	A	B	D	E	B	A	D	A	C	E	D	D	D	B	D	E	E	C	D	D	D	B	D
11.SINIF	D	A	B	E	A	C	C	B	A	D	A	D	C	E	B	C	D	A	B	D	D	A	C	B	D	D	B	B

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1) $\frac{8^3 \cdot 16^2}{4^3+8^2} = \frac{(2^3)^3 \cdot (2^4)^2}{64+64} = \frac{2^9 \cdot 2^8}{128} = \frac{2^{17}}{2^7} = 2^{10}$ (C)

2) $\frac{x}{20-x} = \frac{1}{3}$

$3x = 20 - x$

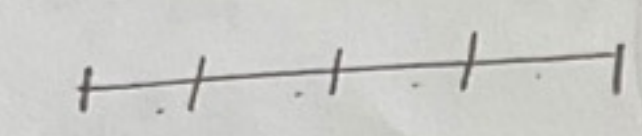
$4x = 20$

$x = 5$ kırmızı

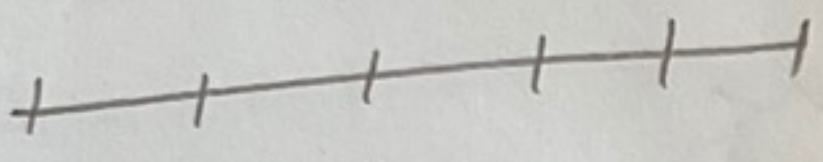
$20 - 5 = 15$ Yeşil

$\frac{\text{Yeşil}}{\text{Tümkare}} = \frac{15}{24} = \frac{5}{8}$ (B)

3)



$\frac{5}{4}$



$\frac{6}{5}$

$\frac{6}{5} < K < \frac{5}{4}$

1,2 — 1,24 — 1,25 (D)

4)

Emir	Ömer
20AB	20AC
2023	2023

Yaş farkları eşittir.

$(23 - AB) \cdot (23 - AC) = 35$

$(23-16) \cdot (23-18) = 35$

7 5

$A = 1$, $B = 6$, $C = 8$

$A + B + C = 15$

7

(A)

5) $10^n = \overbrace{1000\ldots0}^{n \text{ tane}}$

$- \quad 3$

$\overline{5\,5\,5\,5\,7}$

$(n-1)$ tane

$9(n-1) + 7 = 250$

$9(n-1) = 243$

$n - 1 = 27$

$n = 28$

(E)

6)

$$\frac{100x}{}$$

1.	2.	3.
$20x$	$\frac{80^{x}\cdot 60}{100}$ = $48x$	960

$20x + 48x + 960 = 100x$

$960 = 100x - 68x$

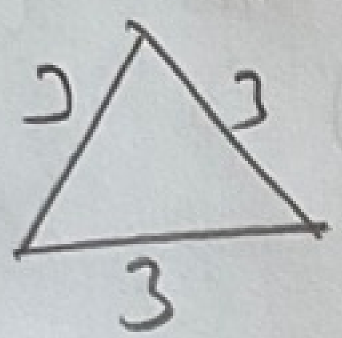
$960 = 32x$

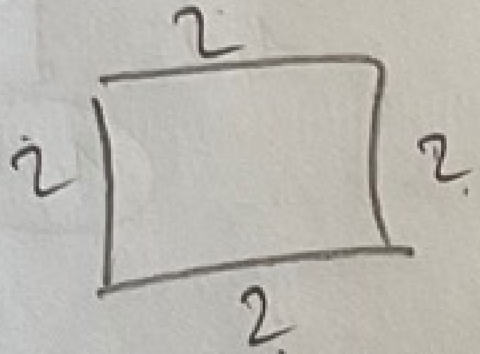
$\boxed{30 = x}$

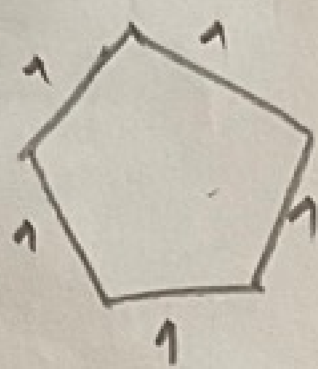
$100 \cdot 30 = 3000$ TL

(A)

7)







En fazla şekil elde etmeliyiz beşgenden en fazla almalıyız.

9	8	5
$\times$ 1	$\times$ 2	$\times$ 19
9 +	16 +	95

$$\begin{array}{r} 95 \\ 16 \\ +\ 9 \\ \hline 120 \end{array}$$

$19 + 2 + 1 = 22$ tane (E)

8) 2 sa = 120 dk

$\overset{30}{\cancel{120}} \cdot \frac{1}{\cancel{4}} = 30$

Normal: 30 —(120-30)→ $\frac{90}{3} = 30$ 2 kat: 30 —(90-30)→ 3 kat: 60

30 dk + 15 dk + 20 dk = 65 dk

(B)

9) $\frac{T+M+Y}{T+M} + \frac{T+M+Y}{T+Y} + \frac{T+M+Y}{M+Y} = 23$

$\frac{T+M}{T+M} + \frac{Y}{T+M} + \frac{T+Y}{T+Y} + \frac{M}{T+Y} + \frac{M+Y}{M+Y} + \frac{T}{M+Y} = 23$

1 1 1

$\frac{Y}{T+M} + \frac{M}{T+Y} + \frac{T}{M+Y} = 23 - 3 = 20$ (B)

10) A) 24 $2^3 \cdot 3$ B) 27 3^3 C) 30 $2 \cdot 3 \cdot 5$ D) 32 2^5 (E) 36 $2^2 \cdot 3^2$

2, 3, 5, 6, 8, 9

11) 3^{15} → Hesap makinesindeki sayı 9 un katıdır.

$1+4+3+4+X+9+0+7 = 28+X$

$28+8 = 36$ ✓

$X = 8$ olmalıdır. (E).

12) p ile p^2+8 (D) p^3+16.

3 17 $27+16 = 43$

13) 2024 2025 2026 2099 2100

5 6 7 8 → 0 ile biter.

$\frac{n+2022}{n+3} = 1 + \frac{2019}{n+3}$ → 2019 u bölen bir n sayı yok

A) 0 olur.

14) 532 | 14
−42 | 38
112
0

(14) (C)

15) Ardarda 4 birim kareden oluşuyorsa satır ve sütunda
en az 8 kare işaretlenmelidir. (D)

16) 1+2+3+ . . . +41

$\frac{41 \cdot 42}{2} = 861$ X

1+2+3+ . . . +40

$\frac{40 \cdot 41}{2} = 820$.

857
−820
37 'i fazla yazmış.

(A)

17) A Y M H I İ O Ö Ü V T (D)

Örnek AYAYIHIMİMOVÖVÜTOTUHİ → en fazla 21 tane

18) 3 pozitif böleni olan sayılar tamkare sayılardır.
Fakat bazı tamkare sayılar bu gruba girmiyor.
Örneğin 16, 36, 81 v.b.

4, 9, 25, 49 4 tane
1,2,4 1,3,9 1,5,25 1,7,49

(E)

Sayılar: A, B, C, D olsun

19) 12, 17, 19, 23, —, ?

48
23
71

A+B=12
A+C=17
A+D=19
B+C=23
B+D=X
\+ C+D=Y

A+B+A+C=29
2A+B+C=29
2A+23=29
2A=6
A=3

A+B=12
3+B=12
B=9

B+C=23
9+C=23
C=14

A+D=19
3+D=19
D=16

B+D=23
C+D=30

(D)

20) 1 1 1 —

3 3 3 — 9 ✓
3 3 1 — 7 ✓
3 1 1 — 5 ✓
3 1 0 — 4 ✓
1 1 1 — 3 ✓
3 3 0 — (6) ✓

(2) alamaz (A)

21) 12 × 9 dikdörtgen: 108 — 108 — 108 × 1 dikdörtgen: 108

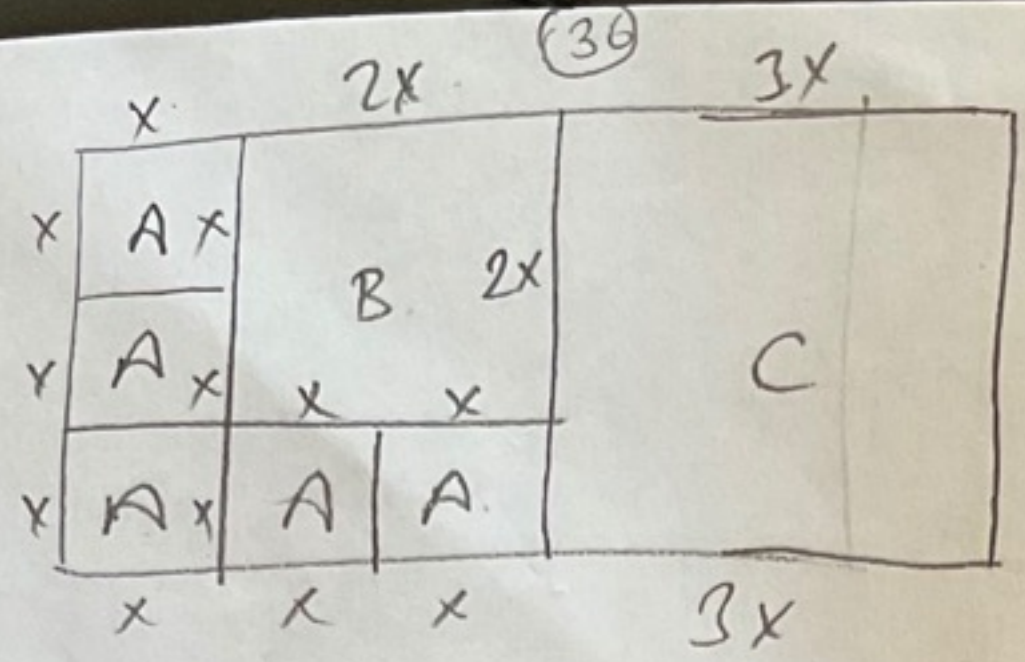
108
1 | 108
2 | 54
3 | 36
4 | 27
6 | 18
9 | 12

y
12+9=21
× 2
42
enk

108+1=109
× 2
G= 218
enb.

218
− 42
176 (D)

22)



$3x = 18$

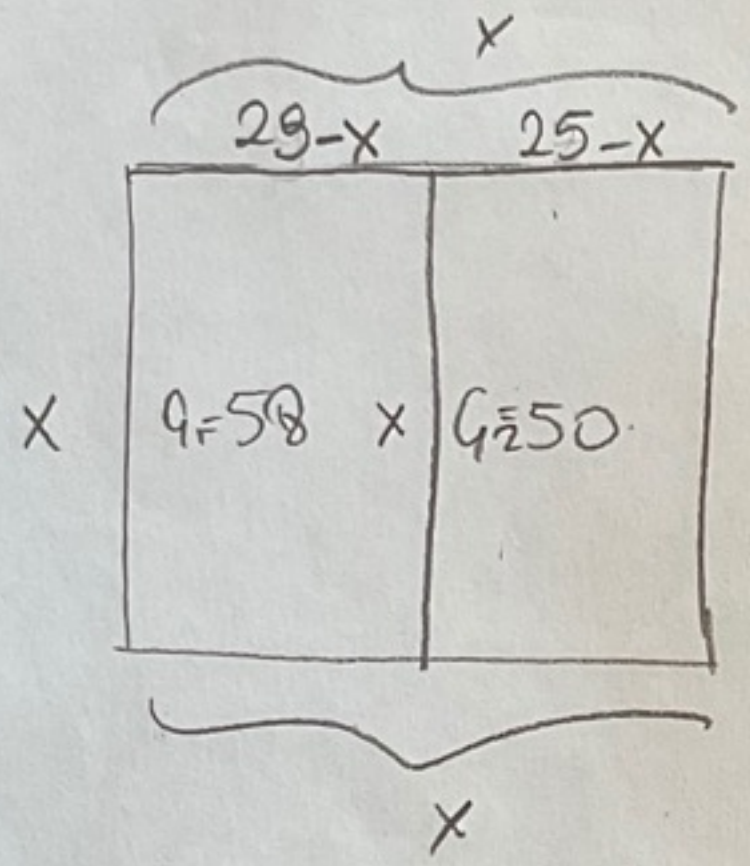
$A \to x^2 > 30$ $\xrightarrow{\text{Enaz}}$ $x = 6$ alın. $A \Rightarrow 36$.

$B \to 4x^2 > 30$ $B \to 144$

$C \to 9x^2 > 30$ $C \to 324$ olur. Hepsi tamkaredir.

Cevre $= (18+36).2 = 54.2 = 108$. (D)

23)



$a_1 = 58 : 2 = 29$

$a_2 = 50 : 2 = 25$

Kare oldugu için tüm kenarları eşittir.

$x = 29 - x + 25 - x$

$x = 54 - 2x$

$3x = 54$

$x = 18$

Karenin Alanı $A = 18^2 = 324$ (D)

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24) $1+2+3+\ldots+n = \frac{n(n+1)}{2.12} = \frac{n(n+1)}{2.12} = \frac{15.16}{2.3.4} = \frac{15.16^{2}}{2.3.4} = 10$

$n = 15$

n'in rakamlar toplamı 6 (E)

$2.12 = 2.3.4^2$ tam bölünmeli

kalansız