ADINIZ :

SOYADINIZ:

SINIFINIZ:

NUMARANİZ:

2014 – 2015 YILI

MATBAZ LİSESİ

2. DÖNEM

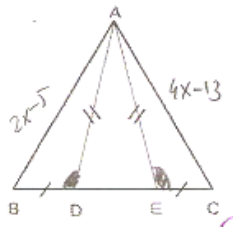
9. SINIF

3. YAZILI

NOT: HER SORUNUN TAM VE DOĞRU ÇÖZÜMÜ 10 PUANDIR.
ÇÖZÜM ADIMLARINIZ TAM OLMALIDIR. SADECE CEVABA PUAN VERİLMEZ. ALDIĞI PUAN: .....

BAŞARI DİLEKLERİMİZLE...

1) ABC üçgen
|AD| = |AE|
|BD| = |EC|
|AB| = 2x – 5
|AC| = 4x – 13
Yukarıdaki verilere göre, x kaç cm dir?



$m(ADE) = m(AED) \Rightarrow m(BDA) = m(AEC)$ (2)

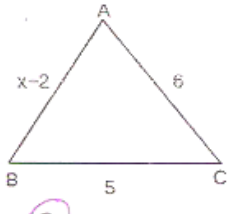
$\triangle BDA \sim \triangle CEA$ (3)

$2x-5 = 4x-13$ (2)

$2x = 8$

$x = 4$ (1)

2) ABC üçgeninde
|BC| = 5 cm
|AC| = 6 cm
|AB| = x – 2 cm
olduğuna göre, x in alabileceği kaç farklı tamsayı değeri vardır?



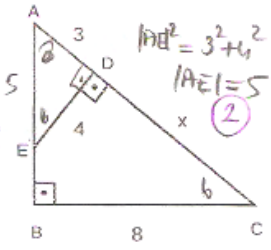
$6-5 < x-2 < 6+5$ (3)

$1 < x-2 < 11$ (2)

$3 < x < 13$ (2)

$x = 4, 5, 6, \ldots, 12 \rightarrow 9$ değer (2) (1)

3) ABC dik üçgen
[DE] ⊥ [AC]
|BC| = 8 br
|DE| = 4 br
|AE| = 3 br Yukarıdaki verilere göre, |DC| = x kaç br dir?



$|AD|^2 = 3^2 + 4^2$

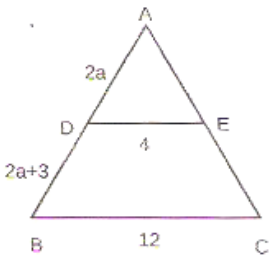
$|AE| = 5$ (2)

$\triangle AED \sim \triangle ACB$ (3)

$\frac{4}{8} = \frac{5}{x+3}$ (3)

$x+3 = 10 \quad x = 7$ (2)

4) ABC üçgen olmak üzere [DE] // [BC],
|BC| = 12 br,
|DE| = 4 br,
|AD| = 2a br,
|BD| = 2a+3 br,
olduğuna göre, a kaç br dir?



$DE \parallel BC \Rightarrow m(\hat{ADE}) = m(\hat{ABC})$ (2)

$m(\hat{AED}) = m(\hat{ACB})$ (2)

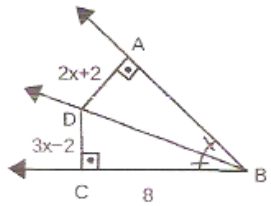
$\frac{2a}{2a+3} = \frac{4}{12}$ (2)

$6a = 4a+3$

$2a = 3$ (2)

$a = 3/2$ (2)

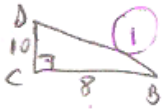
5) [DA] ⊥ [AB]
[DC] ⊥ [CB]
[BD açıortay
|CB| = 8 cm
|AD| = 2x + 2 cm
|CD| = 3x – 2 cm
olduğuna göre, |BD| kaç cm dir?



$\triangle DAB \sim \triangle DCB$ (3)

$2x+2 = 3x-2$

$x = 4$ (2)

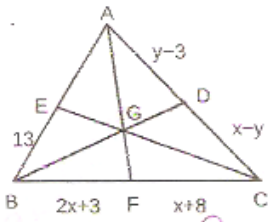


(1)

$|BD| = \sqrt{8^2+10^2}$ (2)

$|BD| = \sqrt{164} = 2\sqrt{41}$ (2)

6) ABC üçgenin de G ağırlık merkezidir.
|BF| = 2x + 3
|FC| = x + 8
|AD| = y – 3
|CD| = x – y
|BE| = 13 br



Yukarıdaki verilere göre, Çevre(ABC) kaç birimdir? [AF], [BD] [CE] medyan (3)

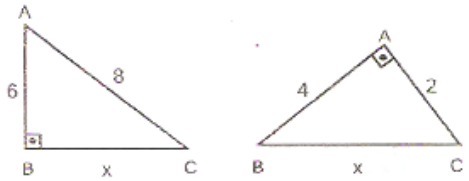
$2x+3 = x+8 \rightarrow x = 5$ (2)

$5-y = y-3 \rightarrow 2y = 8 \quad y = 4$ (2)

$|AE| = |EB|$ (1)

$C(ABC) = 26 + 26 + 2 = 54$ (2)

7) Aşağıda verilen şekillerde x değerini bulunuz?



Pisagor

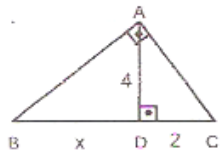
$x = \sqrt{8^2 - 6^2}$

$x = \sqrt{28}$

$x = 2\sqrt{7}$ (2)

$x = \sqrt{4^2 + 2^2}$

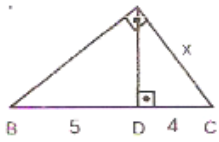
$x = 2\sqrt{5}$ (2)



ökü

$4^2 = x \cdot 2$

$x = 8$ (3)



ökü

$x^2 = 4 \cdot (4+5)$

$x^2 = 36$

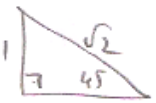
$x = 6$ (3)

8) Aşağıda verilen trigonometrik oranların değerini hesaplayınız?

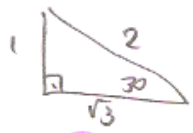
$\sin 45^\circ = \frac{1}{\sqrt{2}}$ $\cos 30^\circ = \frac{\sqrt{3}}{2}$ (5)

$\tan 30^\circ = \frac{1}{\sqrt{3}}$ $\cot 45^\circ = 1$

$\sin 30^\circ = \frac{1}{2}$



(2)



(3)

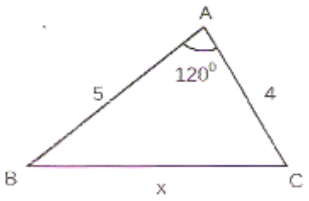
9) $(a-2)x^2 + (b+3)y^2 = c+5$ denklemi birim çember belirttiğine göre, $a+b-c$ işleminin sonucu kaçtır?

$a-2 = 1 \quad b+3 = 1 \quad c+5 = 1$ (6)

$a = 3 \quad b = -2 \quad c = -4$ (2)

$a+b-c = 3-2+4 = 5$ (2)

10) a) ABC üçgen
|AB| = 5 br
|AC| = 4 br
$m(\widehat{BAC}) = 120^\circ$
olduğuna göre, |BC| = x kaç br dir?



(4) $x^2 = 4^2 + 5^2 - 2 \cdot 4 \cdot 5 \cdot \underbrace{\cos 120}_{-1/2}$ kosinüs teoremi (2)

$x^2 = 16 + 25 + 20$ (2)

$x^2 = 61$

$x = \sqrt{61}$ (2)