ADINIZ :

SOYADINIZ:

SINIFINIZ:

NUMARANIZ:

2014 – 2015 YILI

MATBAZ LİSESİ

1. DÖNEM

11. SINIF

GEOMETRİ

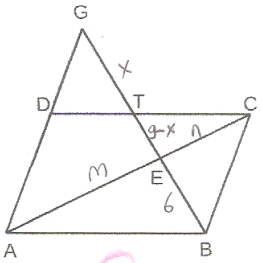
2.2 YAZILI

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

ALDIĞI PUAN: .....

BAŞARI DİLEKLERİMİZLE...

1) ABCD paralelkenar,
$[AC] \cap [BG] = \{E\}$
$|EB| = 6$ br,
$|EG| = 9$ br ise
$|TG|$ kaç birimdir?



$\triangle AGE \sim \triangle CBE$

$\frac{m}{n} = \frac{9}{6}$

$\triangle TEC \sim \triangle BEA$

$\frac{m}{n} = \frac{6}{9-x}$

$\frac{9}{6} = \frac{6}{9-x}$

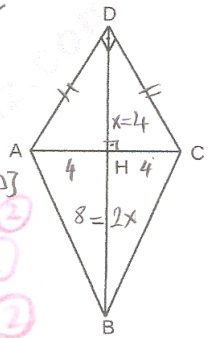
$36 = 81 - 9x$

$9x = 45$

$x = 5$

(Bu soru formülle de yapılabilir
$6^2 = (9-x).9 \rightarrow x$ ✓

2) ABCD deltoid,
$m(\widehat{ADC}) = 90°$
$|AD| = |DC|$ cm ve
$|AH| = 4$, $|BH| = 2.|DH|$
$A(ABCD)$ kaç cm^2 dir?



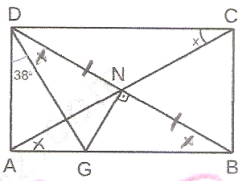
$|AH| = |HC|$ [AC] ⊥ [BD]

$|AH| = |HC| = |DH|$
(muhteşem üçlü)

$|DH| = 4 \Rightarrow |HC| = 8$

$A(ABCD) = \frac{|AC| \cdot |BD|}{2} = \frac{8 \cdot 12}{2} = 48\ br^2$

3) ABCD bir dikdörtgen N köşegenlerin kesim noktasıdır. $NG \perp DB$ Ve $m(\widehat{ADG}) = 38°$ ise $m(\widehat{ACD})$ kaç derecedir?



Köşegenler birbirini ortalar → $|ON| = |NB| \Rightarrow \triangle DGB$ ikizkenardır

$m(\widehat{DCA}) = m(\widehat{CAB}) = m(\widehat{ANB}) = m(\widehat{GDN})$

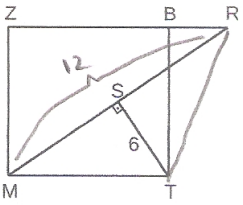
$\triangle ADB$ de $90 + x + x + 38 = 180$

$2x + 38 = 90$

$2x = 52$

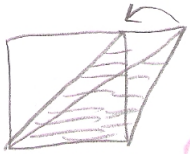
$x = 26$

4) MTBZ bir karedir.
Z, B ve R doğrusaldır.
$[MR] \perp [ST]$, $|ST| = 6$br
ve $|MR| = 12$br ise
Çevre(MTBZ) kaçtır?



$A(\triangle MTR) = \frac{6 \cdot 12}{2} = 36\ br^2$

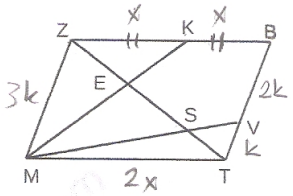
R noktası B ye kaydırsak alan değişmez



$A(\triangle MBT) = A(\triangle MRT) = \frac{A(MTBZ)}{2} = 36$

$A(MTBZ) = 72\ br^2$

5) MTBZ paralelkenar,
ZT köşegendir.
$[MV] \cap [ZT] = \{S\}$,
$[MK] \cap [ZT] = \{E\}$
$2.|VT| = |VB|$
$|KZ| = |KB|$
olduğuna göre, $\frac{|ES|}{|ZT|}$
oranı kaça eşittir?



$\triangle ZEK \sim \triangle TEM$ $\frac{|EI|}{|ET|} = \frac{1}{2}$

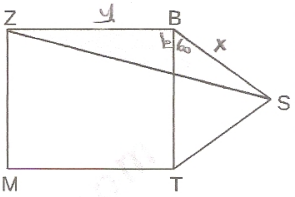
$\triangle ZSM \sim \triangle TSV$ $\frac{|ST|}{|SZ|} = \frac{1}{3}$

$|ZT| = 12c \Rightarrow |ZS| = 9c$ $|ST| = 3c$

$|ZE| = 4c$ $|ET| = 8c$ $|ES| = 5c$

$\frac{|ES|}{|ZT|} = \frac{5c}{12c} = \frac{5}{12}$

6) MTBZ bir dikdörtgen, BTS eşkenar üçgendir. Alan(ZBS)=18 br² ise Alan(MTBZ) kaçtır?



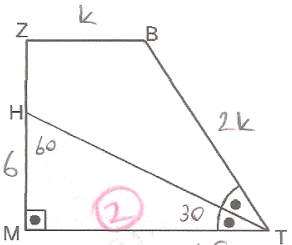
$m(TBS)=60^\circ$ $|BS|=x$ $|BZ|=y$

$\Rightarrow A(ZBS)=\frac{1}{2}\cdot x\cdot y\cdot \sin 150$ ($\frac{1}{2}$)

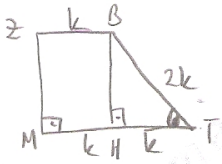
$\Rightarrow 18=\frac{xy}{4} \Rightarrow xy=72$

$A(MTBZ)=x\cdot y=72$ br²

7) MTBZ bir yamuk
[ZB] // [MT]
|HM|=6br ,
$|ZB|=\frac{1}{2}$,
|BT|
|TB|=|MT|
Alan(MTH) kaçtır?



$2k=6\sqrt{3}$



$BH \perp MT$

$\triangle BHT$ 30 60 90 üçgeni

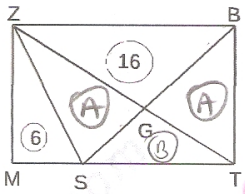
$m(T)=60^\circ$

$m(MTH)=30^\circ$

$A(MTH)=\frac{6\sqrt{3}\cdot 6}{2}$

$=18\sqrt{3}$ br²

8) MTBZ bir dikdörtgendir.
[ZT]∩[SB]={G} .
Alan(MSZ)=6 br² ,
Alan(BGZ)=16 br² ,
ise Alan(BGT) kaç birim karedir?



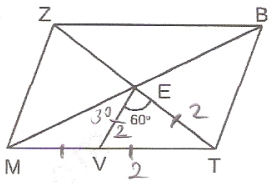
STBZ yamuktur. $A(SGZ)=A(TGB)$

$A(ZSB)=\frac{A(MTBZ)}{2}$

$A+16=A+B+6 \Rightarrow B=10$ br²

$\frac{A}{B}=\frac{16}{A} \Rightarrow A^2=16\cdot 10 \Rightarrow A=4\sqrt{10}$

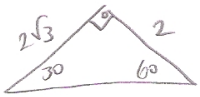
9) MTBZ eşkenar dörtgen,
|MV| = |VT|,
$m(VET)=60^\circ$,
|EV| = 2 cm
olduğuna göre,
A(ABCD) kaç cm² dir?



$m(MET)=90^\circ$ köşegenler dik kesişir.

$|EV|=|MV|=|VT|$ (muhteşem üçlü)

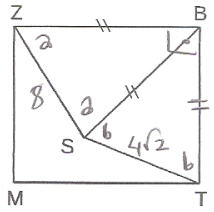
$\triangle VET$ eşkenar üçgen



$|MB|=4\sqrt{3}$ $|ZT|=4$

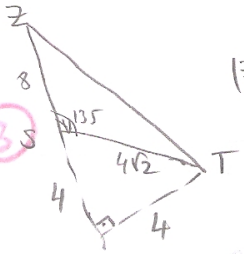
$A(MTBZ)=\frac{4\cdot 4\sqrt{3}}{2}=8\sqrt{3}$ br²

10) MTBZ karedir,
|ZB| = |SB|,
|SZ| = 8 cm
|ST| = $4\sqrt{2}$ cm
olduğuna göre,
Alan(MTBZ) kaç cm² dir?



$90+2a+2b=360^\circ$

$a+b=135^\circ$



$|ZT|=\sqrt{4^2+12^2}$

$|ZT|=\sqrt{16+144}$

$|ZT|=\sqrt{160}$

$|ZT|=2\sqrt{2}=\sqrt{160}$

$a=\sqrt{80}$

$A(MTBZ)=(\sqrt{80})^2=80$ br²