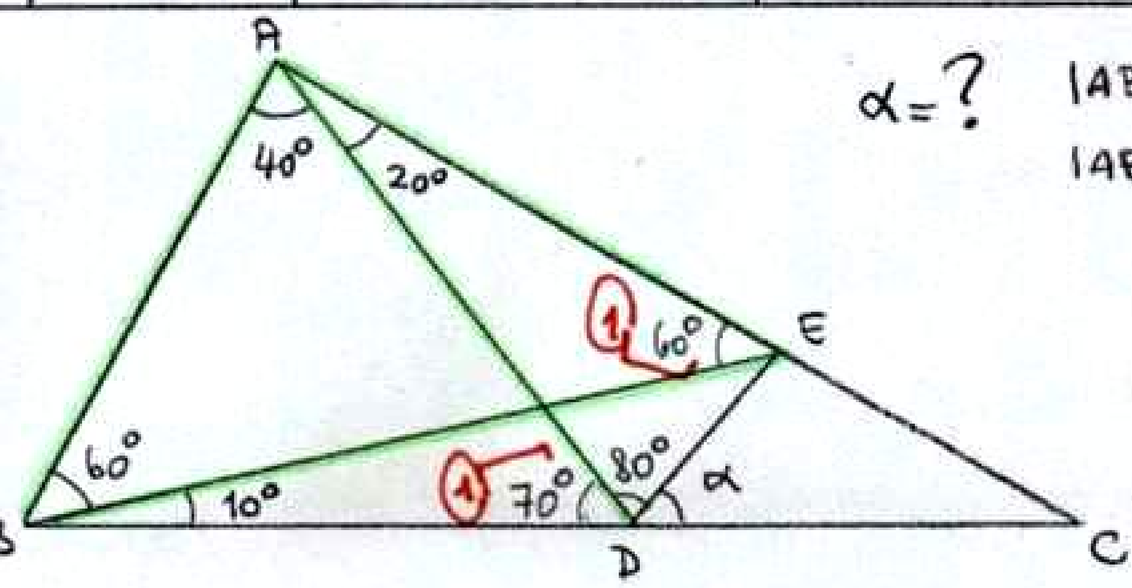
Sınıf	Ad Soyad		ARNAVUTKÖY KORKMAZ YİĞİT ANADOLU LİSESİ 2008-2009 EĞİTİM VE ÖĞRETİM YILI 10 Sınıf II. DÖNEM 2. *Geometri* YAZILISI	
	No			

1 (10 puan)



$\alpha = ?$

$|AB| = |AD|$ (2)

$|AB| = |AE|$ (2) $\rightarrow$ $|AD| = |AE|$ (2)

$\downarrow$

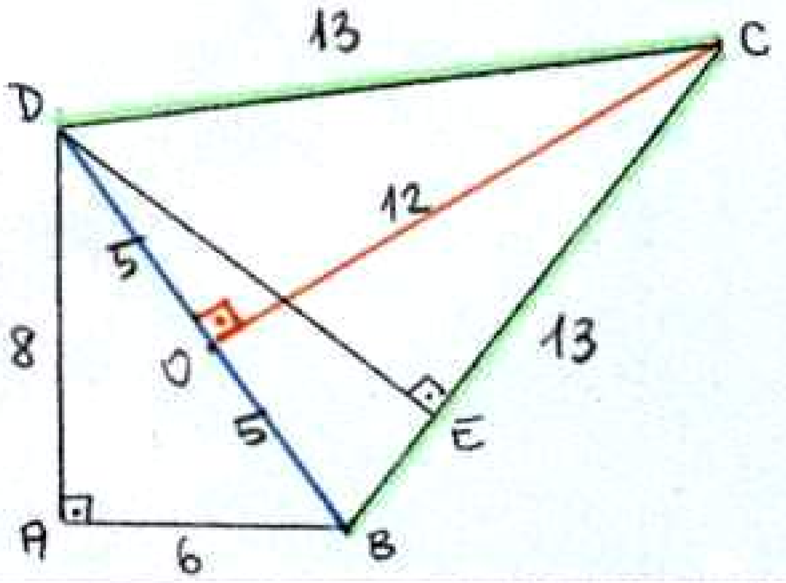
$m(\widehat{ADE}) = 80^\circ$ (1)

$\downarrow$

$70^\circ + 80^\circ + \alpha = 180^\circ$

$\alpha = 30^\circ$ (1)

2 (10 puan)



$|DC| = 13$

$|BC| = 13$

$|AD| = 8$

$|AB| = 6$

$\downarrow$

$|DE| = ?$

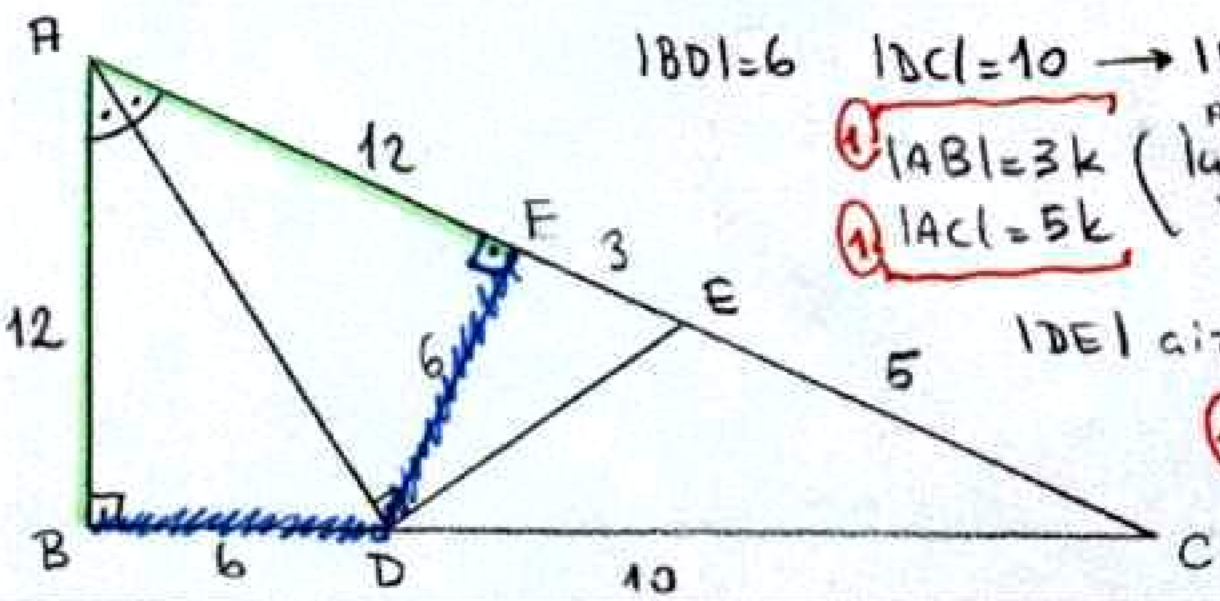
(1) $|DB| = 10 \rightarrow |DO| = |OB| = 5$ (2)

(2) $|OC| = 12$ (Pisagor)

$A(\widehat{CBD}) = \dfrac{10.12}{2} = \dfrac{|DE|.13}{2}$ (2) (2)

$|DE| = \dfrac{120}{13}$ (1)

3 (10 puan)



$|BD| = 6$ $|DC| = 10 \rightarrow |EC| = ?$

(1) $|AB| = 3k$ (ABC'de İç Aç. teo)

(1) $|AC| = 5k$

ABC'de Pisagor

(1) $(3k)^2 + 16^2 = (5k)^2 \rightarrow k = 4$

(1) $|AB| = 12$

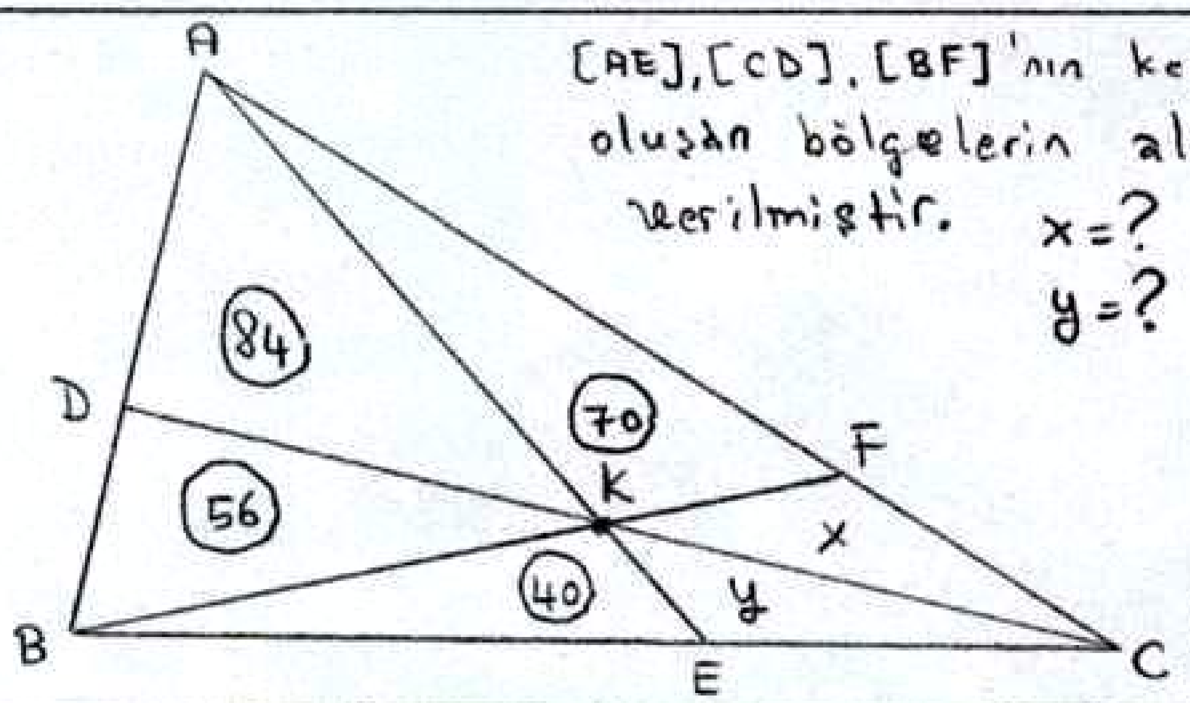
(1) $|AC| = 20$

$|DE|$ çizilir. (1) $|DF| = 6 \wedge |AF| = 12$ (1)

(1) $6^2 = 12.|FE|$ (Euclid) $\rightarrow |FE| = 3$ (1)

$|EC| = 5$ (1)

4 (10 puan)



[AE],[CD],[BF]'nın kesişimiyle $[AE] \cap [BF] = K$ olsun.

oluşan bölgelerin alanları verilmiştir. $x = ?$ $y = ?$

• $\dfrac{|DK|}{|KC|} = \dfrac{84}{70+x} = \dfrac{56}{40+y}$ (3) (= Alanlar oranı)

$3y - 2x = 20$ (*)

• $\dfrac{|AK|}{|KE|} = \dfrac{84+56}{40} = \dfrac{70+x}{y}$ (3) (= Alanlar oranı)

$2x - 7y = -140$ (**)

(*) ∧ (**) $-4y = -120 \rightarrow y = 30$ (2) $x = 35$ (2)

5 (10 puan)

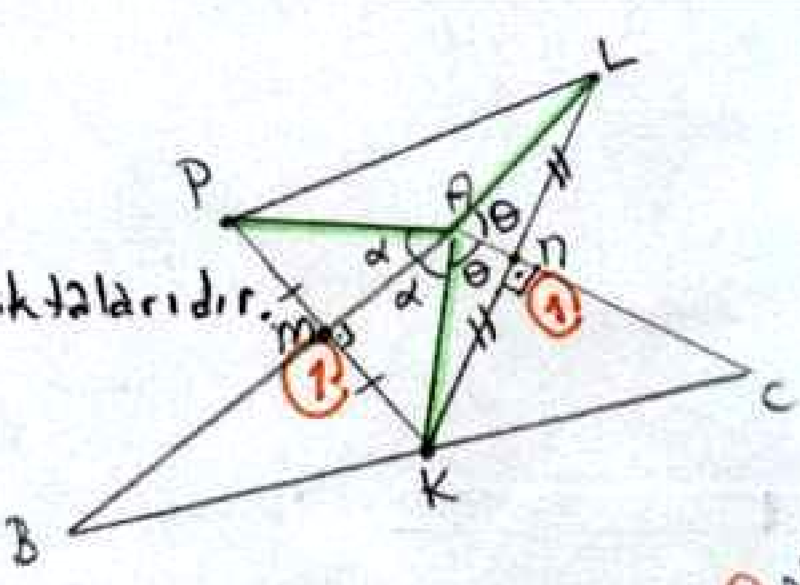
ABC'de $m(\widehat{BAC}) = 150^\circ$

[BC]'na ait K noktasının;

•[AB]'na göre simetriği P,

•[AC]'na göre simetriği L noktalarıdır.

$|AK| = 8 \rightarrow |PL| = ?$



$|PA| = |AK|$ (1)

[Am] açıortay (1)

$|AK| = |AL|$ (1)

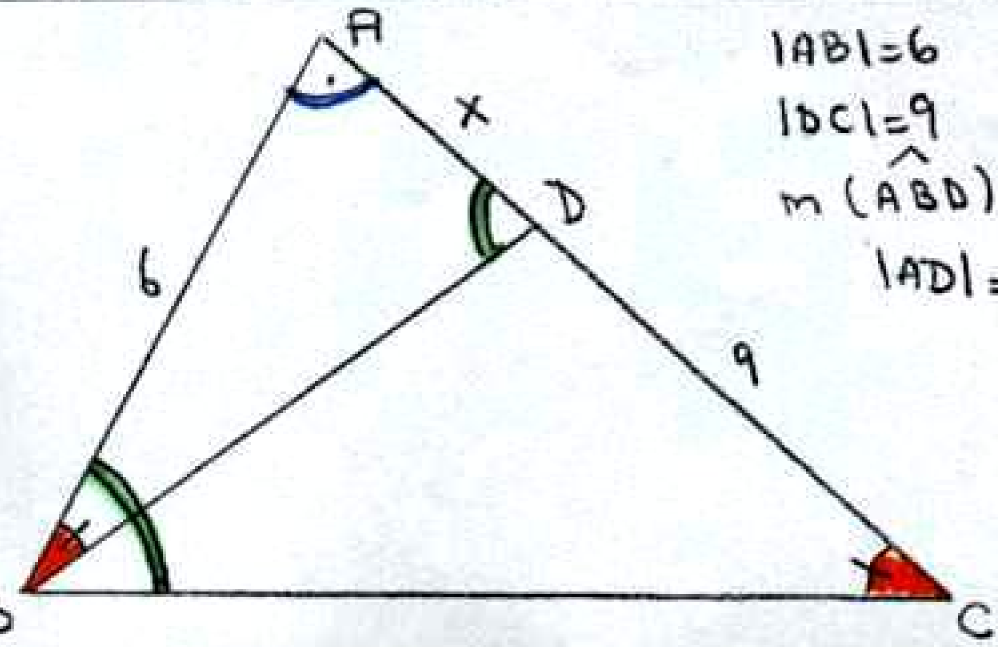
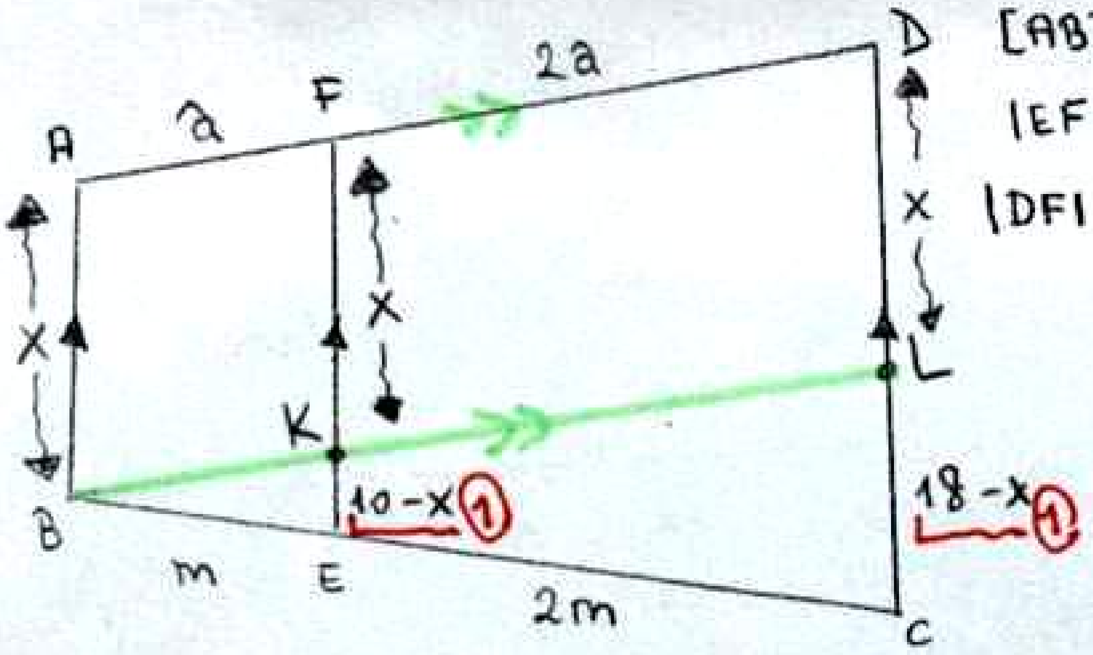
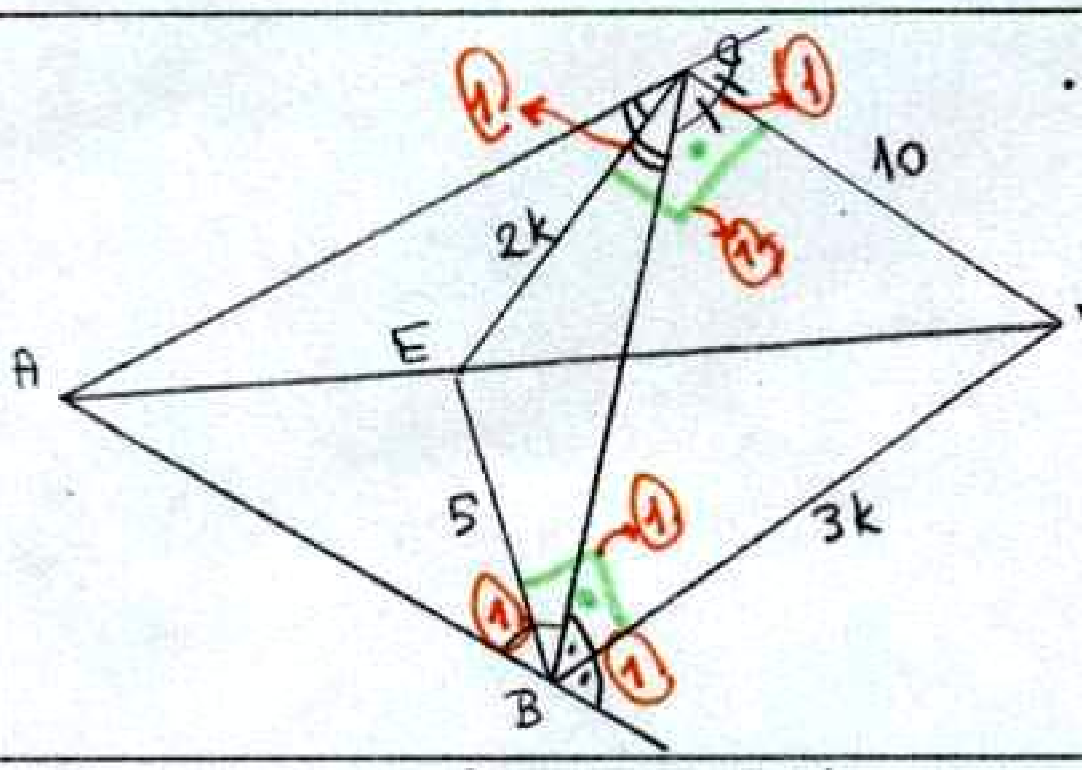
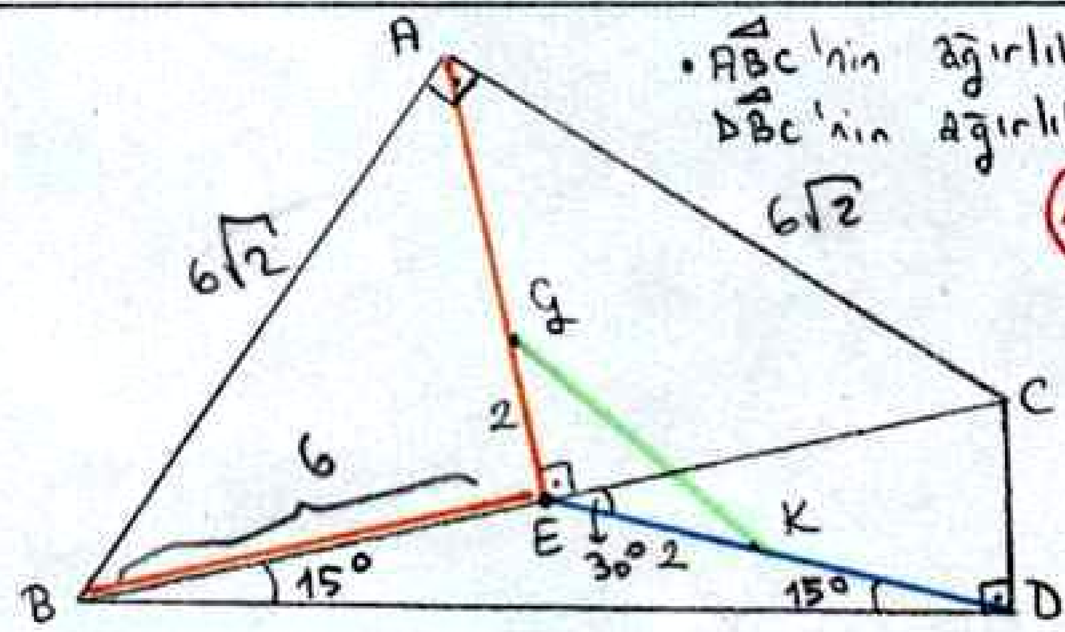
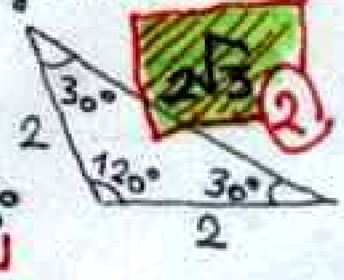
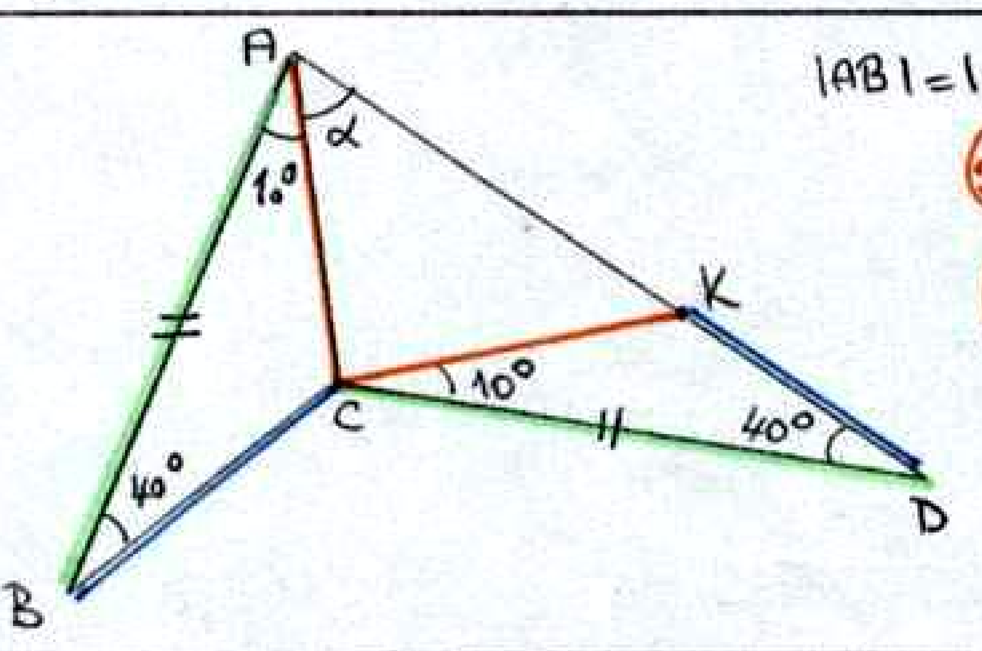
[An] açıortay (1)

$m(\widehat{BAC}) = \alpha + \theta = 150^\circ$

$2\alpha + 2\theta = 300^\circ$

(1) $m(\widehat{PAL}) = 60^\circ \rightarrow |PA| = |AL|$ (1)

(1) $\widehat{PAL}$ eşkenar $\rightarrow |PL| = 8$ (1)

6	10 puan	 $\lvert AB\rvert=6$ $\lvert DC\rvert=9$ $m(\widehat{ABD})=m(\widehat{ACB})$ $\lvert AD\rvert=x=?$ $\overset{\triangle}{ABD} \sim \overset{\triangle}{ACB}$ (A.A.) $\frac{\lvert AB\rvert}{\lvert AC\rvert}=\frac{\lvert BD\rvert}{\lvert CB\rvert}=\frac{\lvert AD\rvert}{\lvert AB\rvert}$ $\frac{6}{x+9}=\frac{x}{6} \rightarrow x^2+9x-36=0$ $x \quad 12$ $x \quad -3$ $(x+12).(x-3)=0 \rightarrow \boxed{x=3}$
7	10 puan	 $[AB] \parallel [FE] \parallel [DC]$ $\lvert EF\rvert=10,\ \lvert CD\rvert=18$ $\lvert DF\rvert=2\lvert FA\rvert \rightarrow \lvert AB\rvert=?$ $[AD] \parallel [BL]$ olacak şekilde $[BL]$ çizilir. $\frac{m}{3m}=\frac{10-x}{18-x}=\frac{1}{3}$ $30-3x=18-x$ $2x=12$ $\boxed{x=6}$
8	10 puan	 • $\overset{\triangle}{ABC}$'ne ait iç teğet çemberin merkezi E, dış teğet çemberin merkezi D. • $\lvert CD\rvert=2\lvert BE\rvert=10$ $2\lvert BD\rvert=3\lvert EC\rvert \rightarrow \lvert CE\rvert=?$ $(2k)^2+10^2=5^2+(3k)^2$ $4k^2+100=25+9k^2$ $5k^2=75$ $k^2=15 \rightarrow k=\sqrt{15}$ $\boxed{\lvert CE\rvert=2\sqrt{15}}$
9	10 puan	 • $\overset{\triangle}{ABC}$'nin ağırlık merk. G $\overset{\triangle}{DBC}$'nin ağırlık merk. K • $\lvert AB\rvert=\lvert AC\rvert=6\sqrt{2}$ $m(\widehat{CBD})=15°$ $\rightarrow \lvert GK\rvert=?$ $\lvert BC\rvert=12$ $(45°\text{-}45°\text{-}90°)$ $\rightarrow \lvert BE\rvert=\lvert EC\rvert=6$ $\lvert AE\rvert=6 \rightarrow \lvert GE\rvert=2$ $\lvert BE\rvert=\lvert ED\rvert=6$ $\lvert DE\rvert=6 \rightarrow \lvert KE\rvert=2$ $m(\widehat{EDB})=15° \rightarrow m(\widehat{CEB})=30°$  $\boxed{2\sqrt{3}}$
10	10 puan	 $\lvert AB\rvert=\lvert CD\rvert \rightarrow \alpha=?$ $[CK]$ çizilir $(m(\widehat{KCD})=10°)$ $\overset{\triangle}{CDK} \cong \overset{\triangle}{ABC}$ (A.K.A.) $\rightarrow \lvert CK\rvert=\lvert AC\rvert$ $\rightarrow m(\widehat{CKA})=\boxed{50°=\alpha}$

(NOT: Soruları yanıtlarken gereken açıklamaları kısaca yazın)

Ümit CANLI
Başarılar...