



Kenarortay:

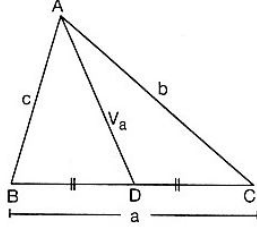
■ Bir üçgende bir kenarın orta noktasını karşı köşeye birleştiren doğru parçasına, o kenara ait **kenarortay** denir.

$|BC| = a$ olduğundan

$[BC]$ kenarına ait kenarortay uzunluğu V_a ile gösterilir.

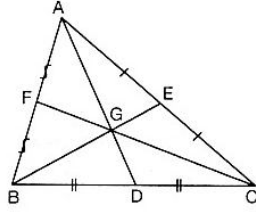
$[AC]$ ye ait kenarortayın uzunluğu V_b ,

$[AB]$ ye ait kenarortayın uzunluğu V_c ile gösterilir.



Ağırlık Merkezi:

■ Bir üçgende üç kenarortay bir noktada kesişir. Bu noktaya üçgenin **ağırlık merkezi** denir. Şekilde G noktası üçgenin ağırlık merkezidir.

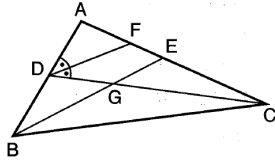


Örnek-1

ABC üçgeninde
G ağırlık merkezi
 $[DF]$ açıortay
 $|CD| = 8$ cm
 $|AD| = 3$ cm

$|EF| = 2$ cm ise **$|AC|$ kaç cm dir?**

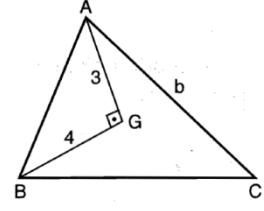
- A) $\frac{36}{5}$ B) 8 C) $\frac{42}{5}$ D) $\frac{44}{5}$ E) 9



Örnek-2

ABC üçgeninde
G ağırlık merkezi
 $[AG] \perp [BG]$
 $|AG| = 3$ cm
 $|BG| = 4$ cm ise
 $|AC| = b$ kaç cm dir?

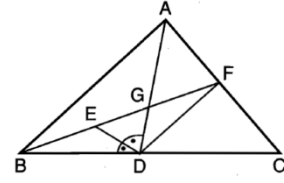
- A) $3\sqrt{5}$ B) $4\sqrt{3}$ C) 7 D) $5\sqrt{2}$ E) $2\sqrt{13}$



Örnek-3

ABC üçgeninde
G ağırlık merkezidir.
 $m(\widehat{BDE}) = m(\widehat{EDA})$
 $|AG| = |BD|$
 $|BF| = 18$ cm
 $|AB| = 16$ cm ise
 $|FD| + |EG|$ kaç cm dir?

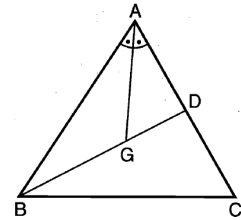
- A) 6 B) 8 C) 10 D) 11 E) 12



Örnek-4

ABC üçgeninde
G ağırlık merkezi
 $m(\widehat{BAG}) = m(\widehat{GAC})$
 $|BD| = 15$ cm
 $|BC| = 16$ cm ise
 $|AG|$ kaç cm dir?

- A) 8 B) 10 C) 12 D) 13 E) 15



Örnek-5

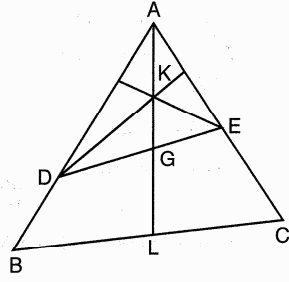
G, ABC üçgeninin
ağırlık merkezi

K, ADE üçgeninin
ağırlık merkezidir.

Buna göre,

$$\frac{2 \cdot |GL| - |AK|}{|KG|}$$

oranı kaçtır?



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

Örnek-6

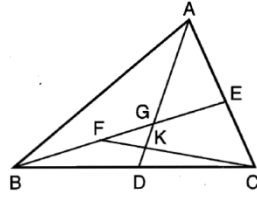
ABC üçgeninde

G ağırlık merkezi

$[BE] \cap [CF] = \{F\}$

$|BF| = |FG|$ ise

$\frac{|GK|}{|AD|}$ oranı nedir?



- A) $\frac{1}{6}$ B) $\frac{1}{3}$ C) $\frac{2}{7}$ D) $\frac{1}{4}$ E) $\frac{2}{9}$

Örnek-7

ABC üçgeninde

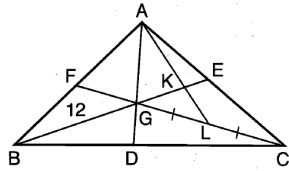
$[AD]$, $[BE]$ ve $[FC]$

kenarortaylar

A, K, L doğrusal

$|GL| = |LC|$

$|BG| = 12$ cm ise $|KE|$ kaç cm dir?



- A) 1 B) 2 C) $\frac{5}{2}$ D) 3 E) $\frac{7}{2}$

Örnek-8

ABC üçgeninde

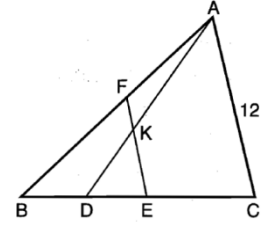
$[AD] \cap [FE] = \{K\}$

$|AF| = |FB|$

$|EC| = 2|BD| = 2|DE|$

$|AC| = 12$ cm ise

$|FK|$ kaç cm dir?



- A) 1 B) 2 C) 3 D) 4 E) 6

Örnek-9

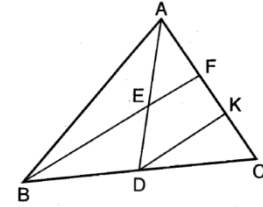
ABC üçgeninde

$[AD]$ kenarortay

$[DK] \parallel [BF]$

$|AF| = 2|FK|$ ise

$\frac{|BE|}{|DK|}$ kaçtır?



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

Örnek-10

ABC üçgeninin

ağırlık merkezi K,

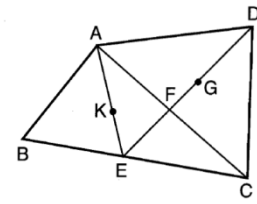
ACD üçgeninin

ağırlık merkezi G,

$|GD| = |GE|$

$|AB| = 12$ cm ise

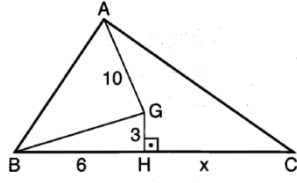
$|FD|$ kaç cm dir?



- A) 6 B) 9 C) 12 D) 15 E) 18

Örnek-11

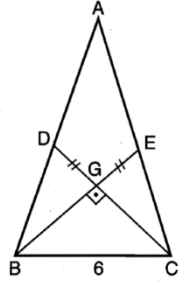
ABC üçgeninde
G ağırlık merkezi
[GH] \perp [BC]
|AG| = 10 cm
|BH| = 6 cm
|GHI| = 3 cm ise
|HCI| = x kaç cm dir?



- A) 12 B) 13 C) 14 D) 15 E) 16

Örnek-12

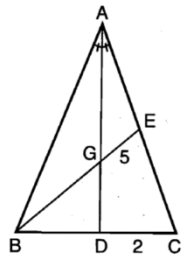
ABC üçgeninde
G ağırlık merkezi
[BE] \perp [CD]
|DG| = |GE|
|BC| = 6 cm ise
|AC| kaç cm dir?



- A) $6\sqrt{2}$ B) 9 C) $3\sqrt{10}$ D) 10 E) 12

Örnek-13

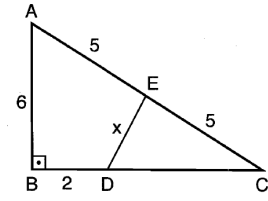
ABC üçgeninde
G ağırlık merkezi
[AD] açıortay
|DC| = 2 cm ve
|EG| = 5 cm ise
|ADI| kaç cm dir?



- A) $6\sqrt{3}$ B) $8\sqrt{3}$ C) $8\sqrt{6}$ D) $10\sqrt{6}$ E) $12\sqrt{6}$

Örnek-14

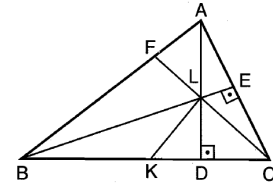
ABC üçgeninde
[AB] \perp [BC]
|AE| = |EC| = 5 cm
|AB| = 6 cm
|BD| = 2 cm ise
|IDE| = x kaç cm dir?



- A) $2\sqrt{3}$ B) $\sqrt{13}$ C) $\sqrt{15}$ D) $3\sqrt{2}$ E) $\sqrt{17}$

Örnek-15

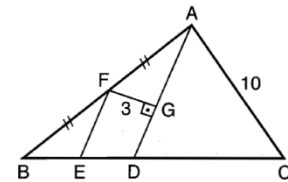
ABC üçgeninde
[BE] \perp [AC]
[AD] \perp [BC]
F, L, C doğrusal
|LC| = 6 cm
|FL| = 2 cm
|BK| = |KC| = 5 cm ise
|IKL| kaç cm dir?



- A) 3 B) $\sqrt{13}$ C) $\sqrt{26}$ D) 6 E) $2\sqrt{13}$

Örnek-16

ABC üçgeninde
G ağırlık merkezi
[FG] \perp [AD]
[FE] // [AD]
|AF| = |FB|
|FG| = 3 cm
|AC| = 10 cm ise
|FEI| kaç cm dir?



- A) 3 B) 4 C) 5 D) 6 E) 8