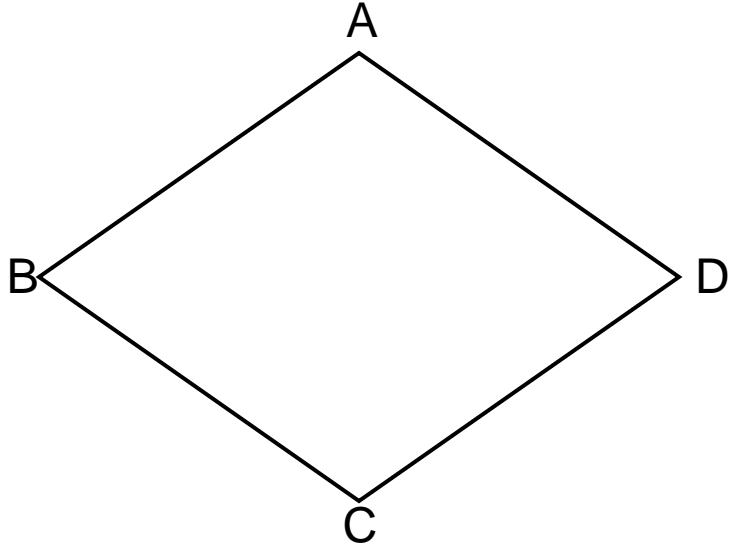
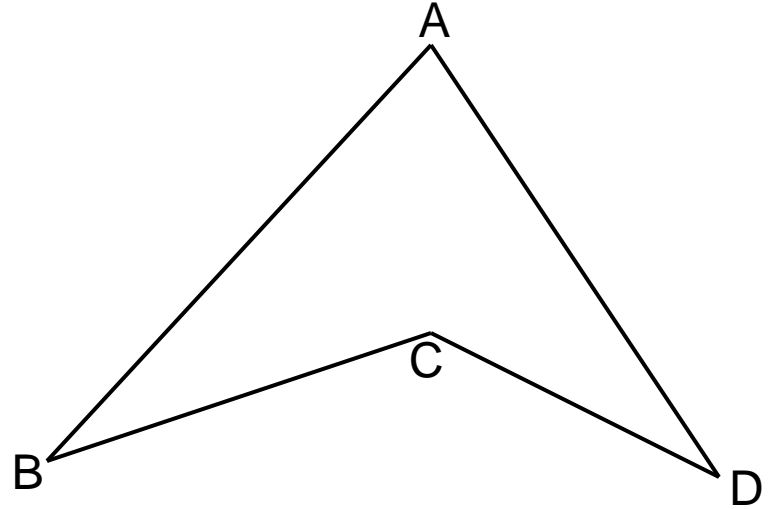


Dörtgen:

Düzlemde doğrusal olmayan dört noktanın birleşimine dörtgen denir.



Konveks dörtgen



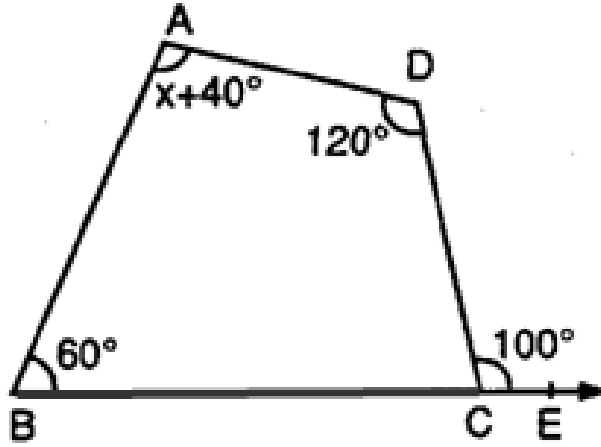
Konkav dörtgen

Özellikleri:

- 1) Bir dörtgenin iç ve dış açılarının ölçüleri toplamı 360 derecedir.



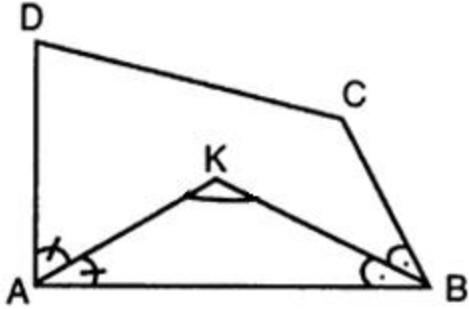
ÖRNEK



Yukarıdaki verilere göre, x kaç derecedir?

- A) 60 B) 70 C) 80 D) 90 E) 100

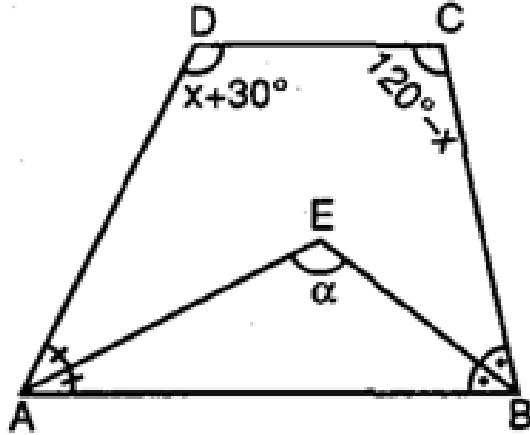
2) Dörtgende komşu iki açıortay arasındaki açı:



$$m(\widehat{AKB}) = \frac{m(\widehat{D}) + m(\widehat{C})}{2} \text{ dir.}$$



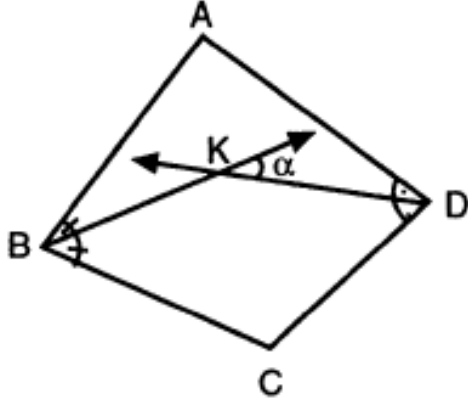
ÖRNEK



Yukarıdaki verilere göre, α kaç derecedir?

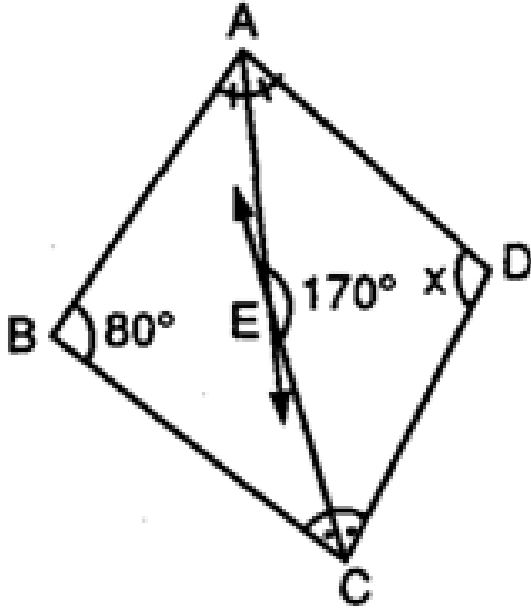
- A) 45 B) 60 C) 75 D) 90 E) 100

3) Dörtgende karşılıklı iki açıortay arasındaki açı:



$$\alpha = \frac{|\widehat{m(A)} - \widehat{m(C)}|}{2} \text{ dir.}$$

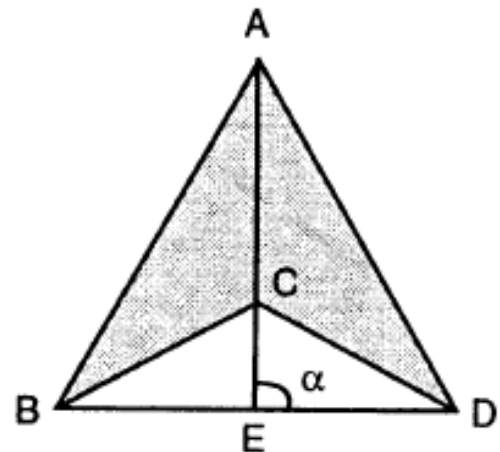
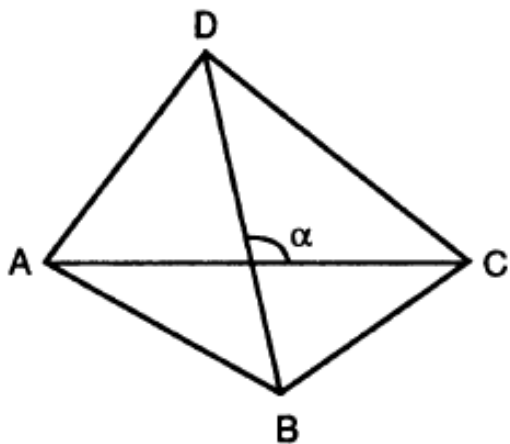
 **ÖRNEK**



Yukarıdaki verilere göre, x kaç derecedir?

- A) 100 B) 90 C) 80 D) 70 E) 60

4)



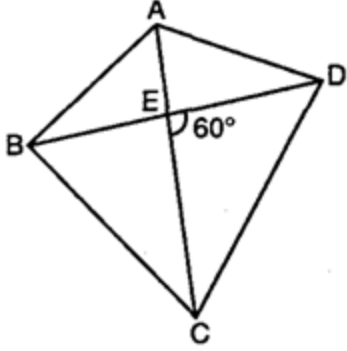
$$A(ABCD) = \frac{1}{2} |AC| \cdot |BD| \cdot \sin \alpha$$

Eğer $\alpha = 90^\circ$

$$A(ABCD) = \frac{1}{2} \cdot |AC| \cdot |BD|$$



ÖRNEK



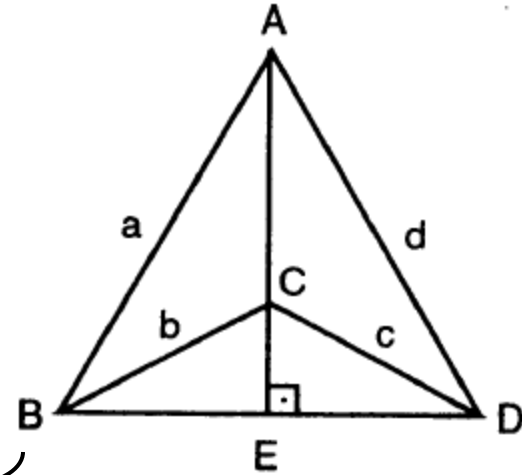
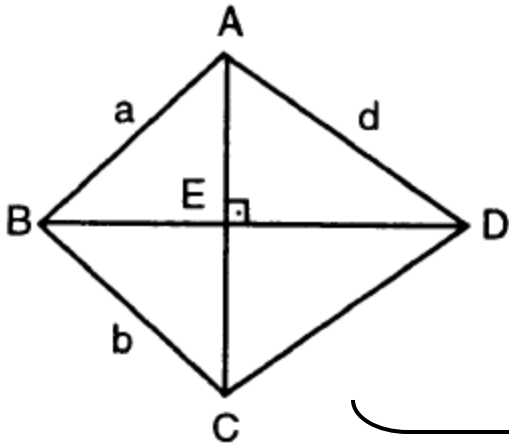
$$|BD| = 8 \text{ cm}$$

$$|AC| = 6\sqrt{3} \text{ cm}$$

Yukarıdaki verilere göre, ABCD dörtgeninin alanı kaç cm^2 dir?

- A) 48 B) 36 C) 32 D) 28 E) 24

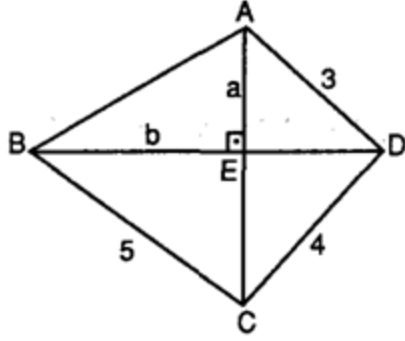
5) Dikgen: Köşegenleri birbirine dik olan dörtgene dikgen denir.



$$a^2 + c^2 = b^2 + d^2$$



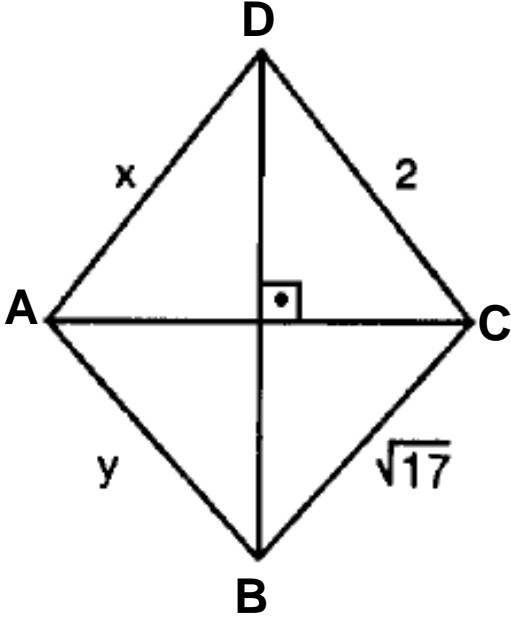
ÖRNEK



Yukarıdaki verilere göre, $a^2 + b^2$ toplamı kaçtır?

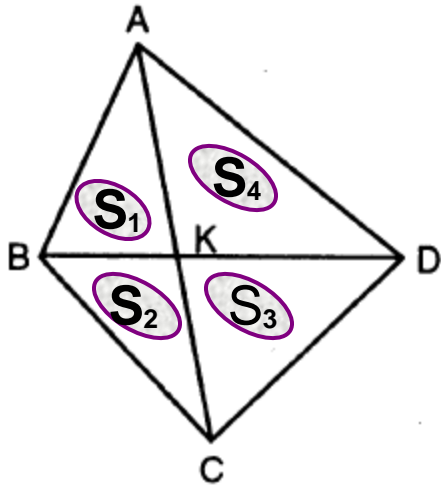
- A) 18 B) 16 C) 12 D) 10 E) $3\sqrt{2}$

 **ÖRNEK**



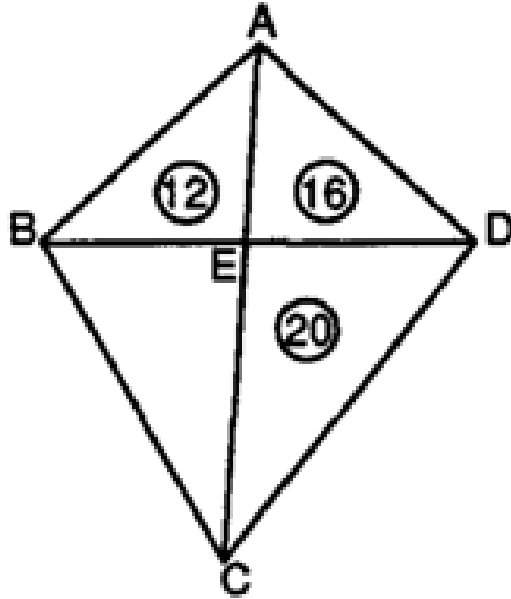
x ve y birer tamsayı olduğuna göre $\frac{x}{y} = ?$

6)



$$S_1 \cdot S_3 = S_2 \cdot S_4$$

 **ÖRNEK**



ABCD bir dörtgen

$$[AC] \cap [BD] = \{E\}$$

$$\text{Alan}(ABE) = 12 \text{ cm}^2$$

$$\text{Alan}(AED) = 16 \text{ cm}^2$$

$$\text{Alan}(DEC) = 20 \text{ cm}^2$$

Yukarıdaki verilere göre, Alan(BEC) kaç cm^2 dir?

A) 12

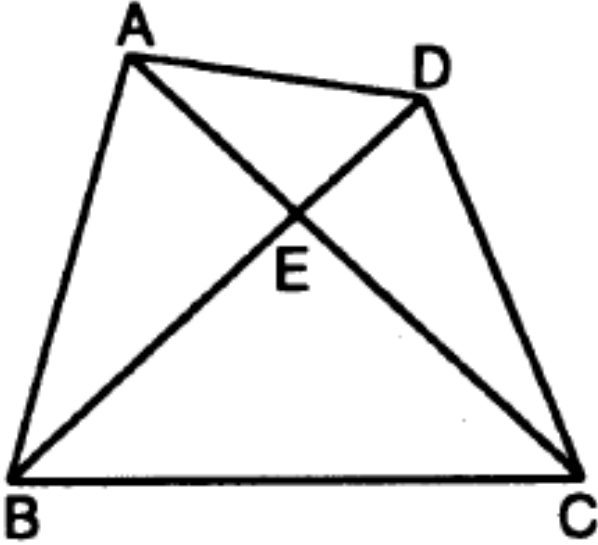
B) 15

C) 18

D) 20

E) 25

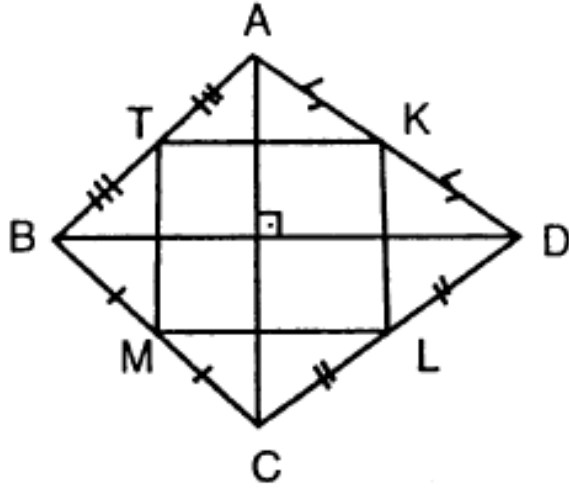
 **ÖRNEK**



BE=4, DE=3 olduğuna göre

$$\frac{A(ADC)}{A(ABC)} = ?$$

7) Konveks bir dörtgende, kenarların orta noktaları M, L, K, T olmak üzere;



MLKT dörtgeni paralelkenardır.

Köşegenler eşit ise, MLKT eşkenar dörtgendir.

Köşegenler dik ise, MLKT dik dörtgendir.

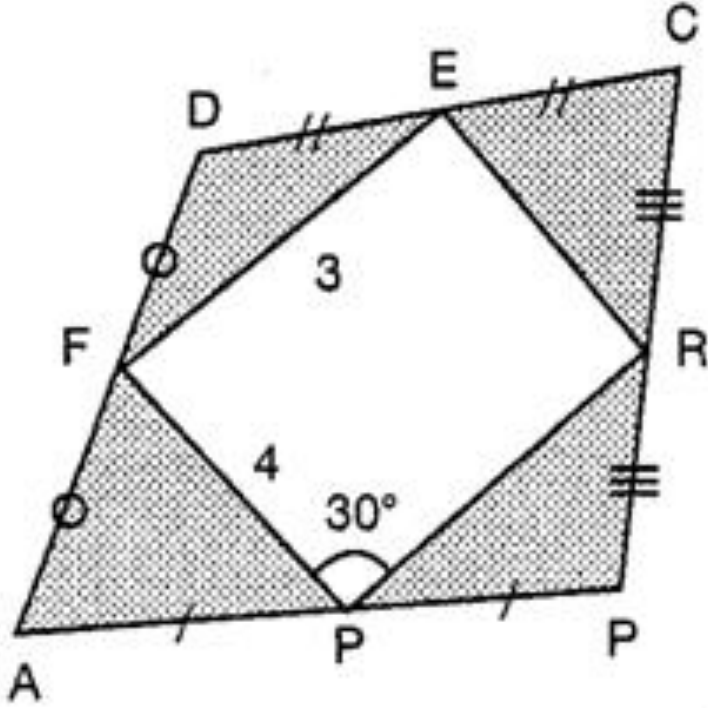
Köşegenler hem dik hem eşit ise, MLKT karedir.

$$\text{Alan}(\text{TKLM}) = \frac{\text{Alan}(\text{ABCD})}{2}$$

$$\text{Çevre}(\text{TKLM}) = |\text{BD}| + |\text{AC}| \text{ dir.}$$



ÖRNEK



taralı bölgenin alanı kaç cm^2 dir?

- A) 12 B) 10 C) 8 D) 6 E) 4

 **ÖRNEK**

ABCD dörtgeninde

E, F ve K buldukları kenarların orta noktalarıdır.

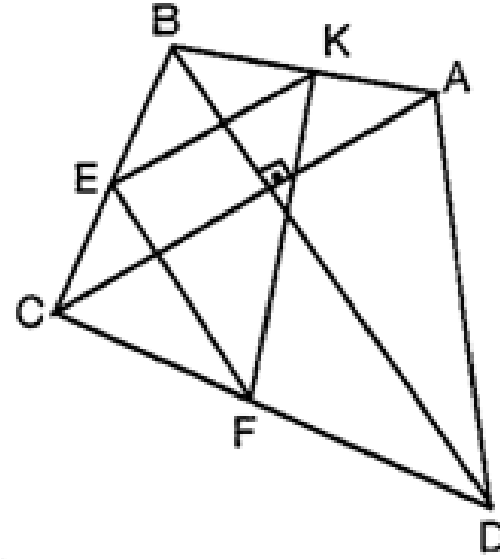
$$[BD] \perp [CA]$$

$$|AC| = 16 \text{ cm}$$

$$|BD| = 30 \text{ cm}$$

olduğuna göre,

|FK| kaç cm dir?

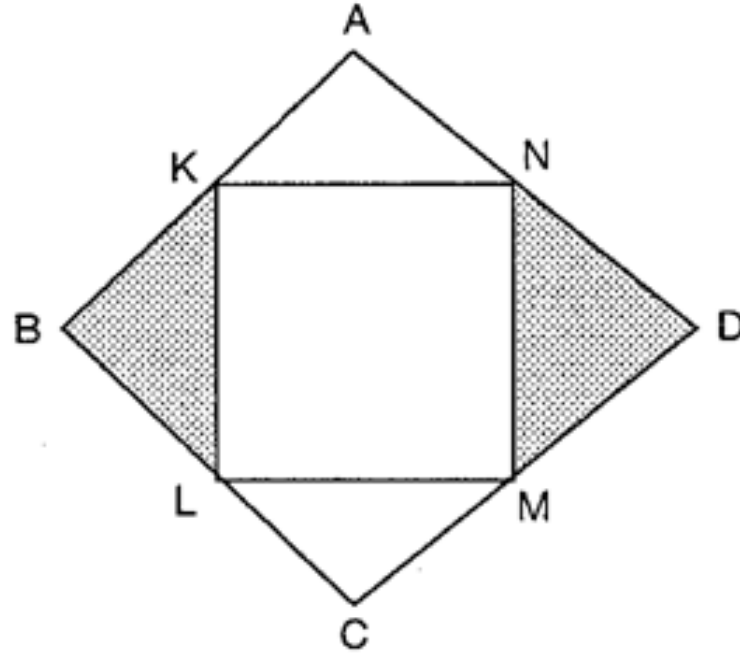


- A) 10 B) 12 C) 15 D) 17 E) 20

 **ÖRNEK**

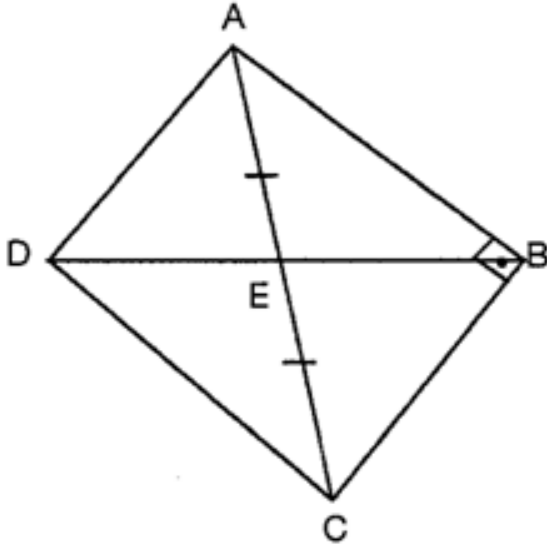
ABCD dörtgeninde K, L, M ve N buldukları kenarların orta noktalarıdır.

Taralı alanlar toplamı 12 cm^2 olduğuna göre, Alan(KLMN) kaç cm^2 dir?



- A) 18 B) 24 C) 36 D) 48 E) 60

 **ÖRNEK**



$$m(\widehat{ACB}) = 30^\circ$$

$$|AC| = 12 \text{ cm}$$

$$|DE| = 2 \cdot |EB|$$

$$|AE| = |EC|$$

olduğuna göre,

Alan(ABCD) kaç cm^2 dir?

A) $27\sqrt{3}$

B) $30\sqrt{3}$

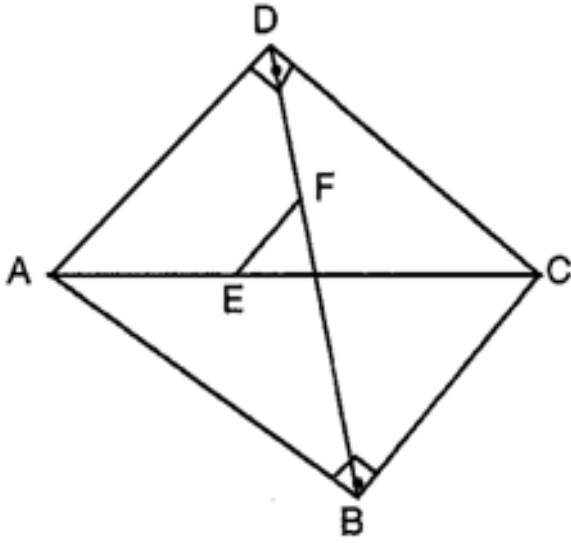
C) $32\sqrt{3}$

D) $40\sqrt{3}$

E) $54\sqrt{3}$



ÖRNEK



$$|AE| = |EC|$$

$$|DF| = |FB|$$

$$|AC| = 50 \text{ cm}$$

$$|BD| = 48 \text{ cm}$$

olduğuna göre,

|EF| kaç cm dir?

A) 6

B) 7

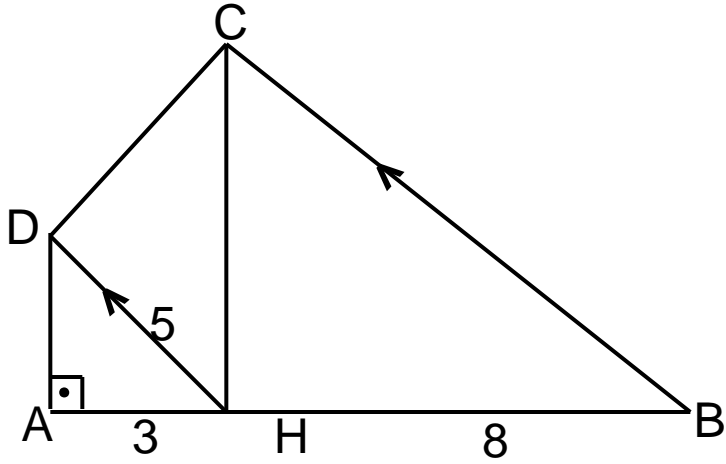
C) 8

D) 9

E) 10



ÖRNEK



$$A(\text{AHCD})=?$$

 **ÖRNEK**

ABCD dörtgeninde

$[ED] \parallel [BC]$

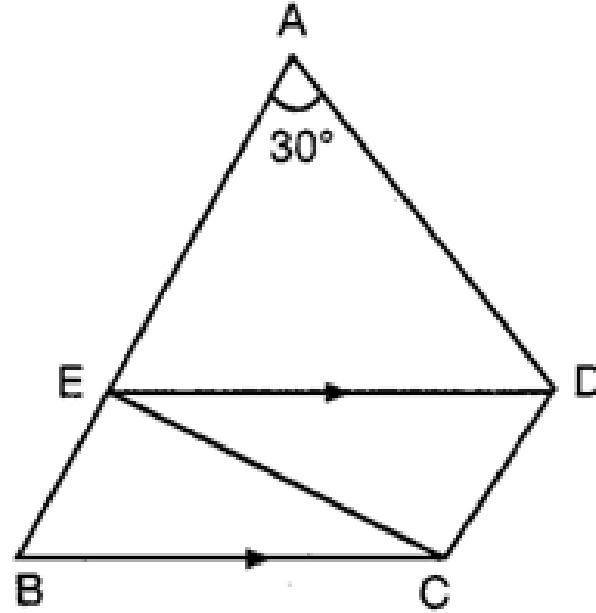
$m(\widehat{BAD}) = 30^\circ$

$|AD| = 4 \text{ cm}$

$|AB| = 6 \text{ cm}$

olduğuna göre,

**Alan(AECD) kaç cm^2
dir?**



A) 4

B) 6

C) 8

D) 10

E) 12

 **ÖRNEK**

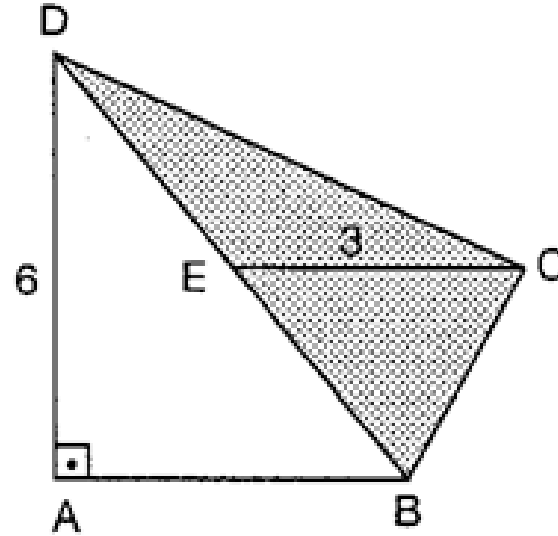
$$[CE] \parallel [AB]$$

$$[AD] \perp [AB]$$

$$|AD| = 6 \text{ cm}$$

$$|EC| = 3 \text{ cm}$$

Yukarıdaki verilere göre,
Alan(BCD) kaç cm^2 dir?



A) 9

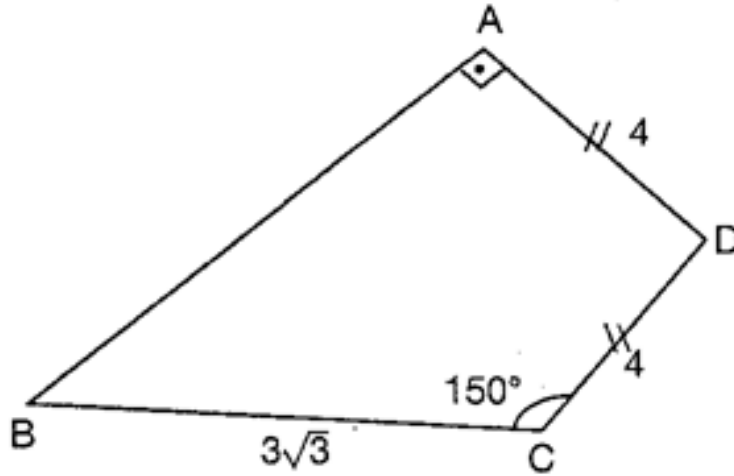
B) 12

C) 18

D) 24

E) 36

 **ÖRNEK**



$$m(\widehat{BAD}) = 90^\circ$$

$$m(\widehat{ACD}) = 150^\circ$$

$$|AD| = |CD| = 4 \text{ cm}$$

$$|BC| = 3\sqrt{3} \text{ cm}$$

Yukarıdaki verilere göre, $|AB|$ kaç cm dir?

- A) $3\sqrt{7}$ B) $3\sqrt{6}$ C) $5\sqrt{2}$ D) $4\sqrt{3}$ E) $4\sqrt{2}$

 **ÖRNEK**

ABCD bir dörtgen

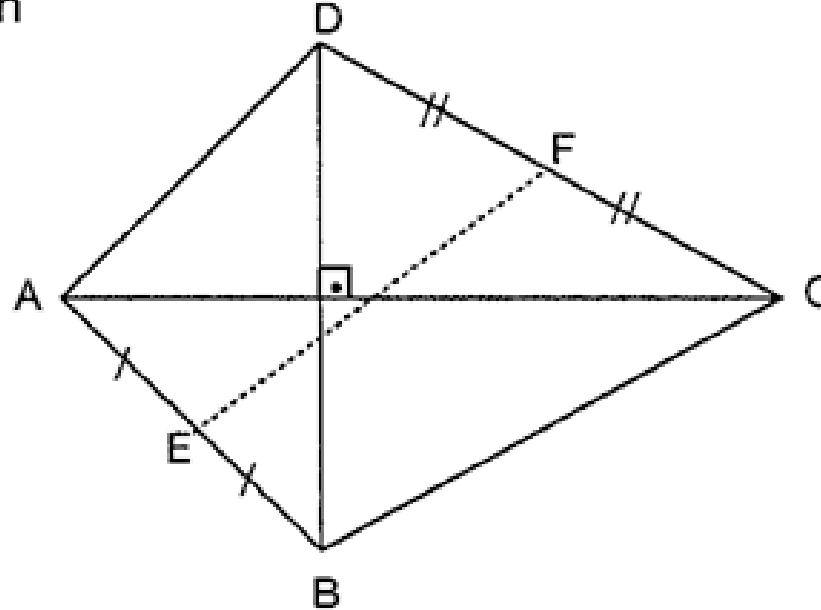
$[AC] \perp [BD]$

$|DF| = |FC|$

$|AE| = |EB|$

$|EF| = 10$ cm

$|BD| = 12$ cm



Yukarıdaki verilere göre, Alan(ABCD) kaç cm^2 dir?

A) 48

B) 72

C) 96

D) 108

E) 144

 **ÖRNEK**

Şekilde, $[AB] \perp [AD]$,

$[AE] \perp [DC]$ ve

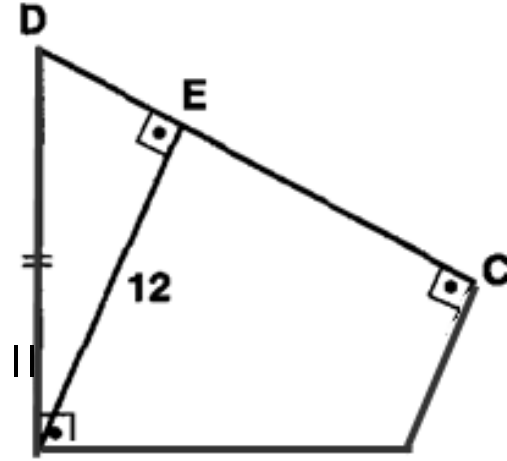
$[BC] \perp [DC]$ dir.

$|AB| = |AD|$ ve

$|AE| = 12$ cm

olduğuna göre,

$A(ABCD)$ kaç cm^2 dir?



A) 72

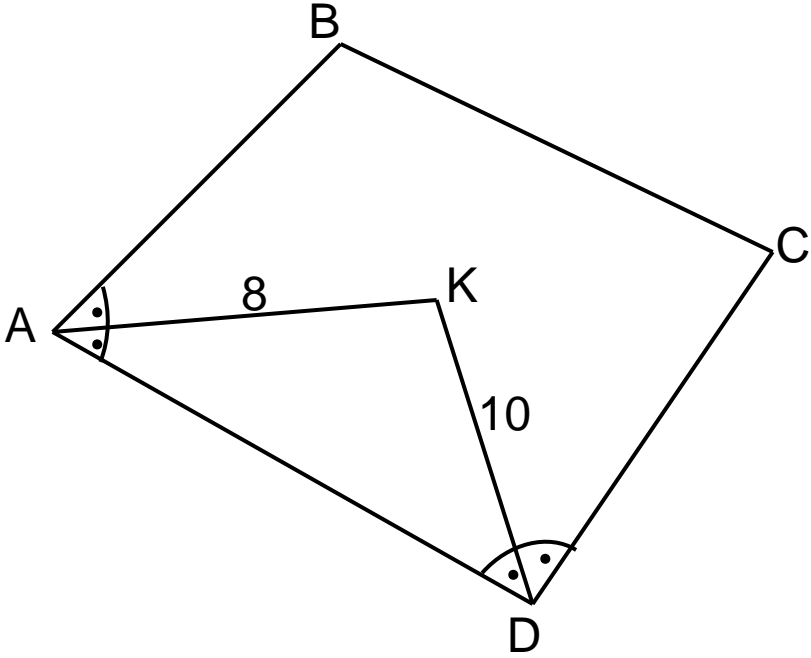
B) 96

C) 108

D) 126

E) 144

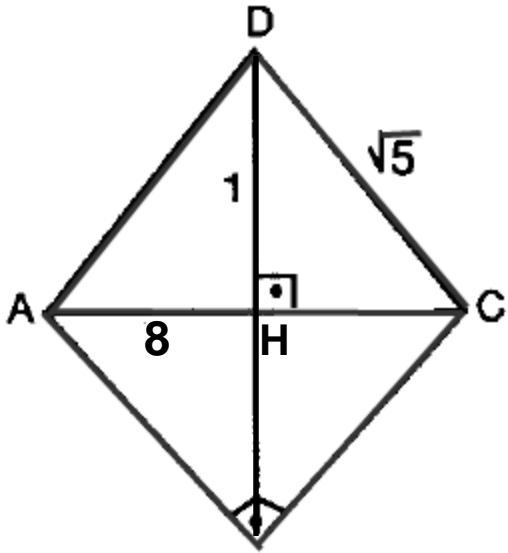
 **ÖRNEK**



$ABC > 100$, $BCD > 80$,
 $AK = 8$, $DK = 10$ olduğuna göre
 $A(KAC)$ nin en büyük tamsayı değeri kaçtır?



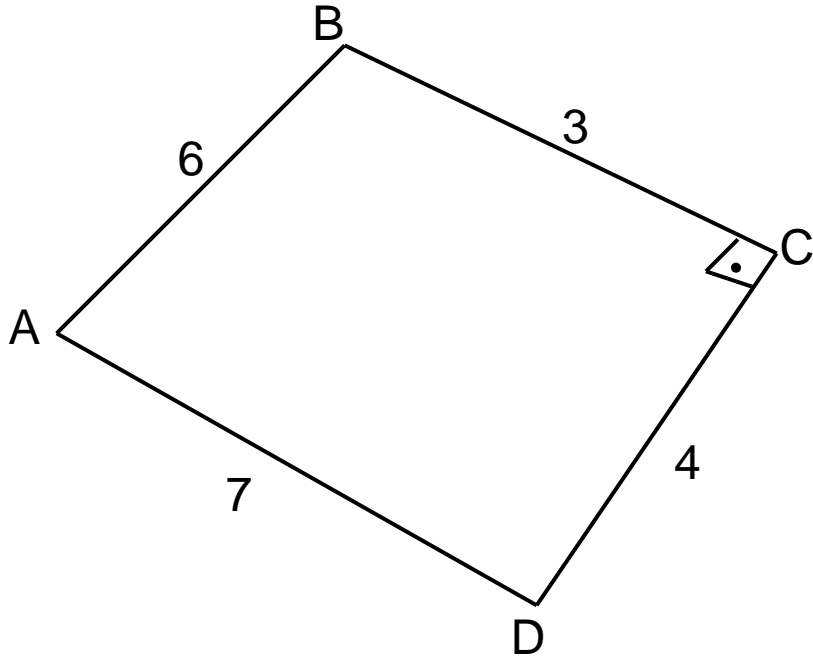
ÖRNEK



$A(ABCD)=?$

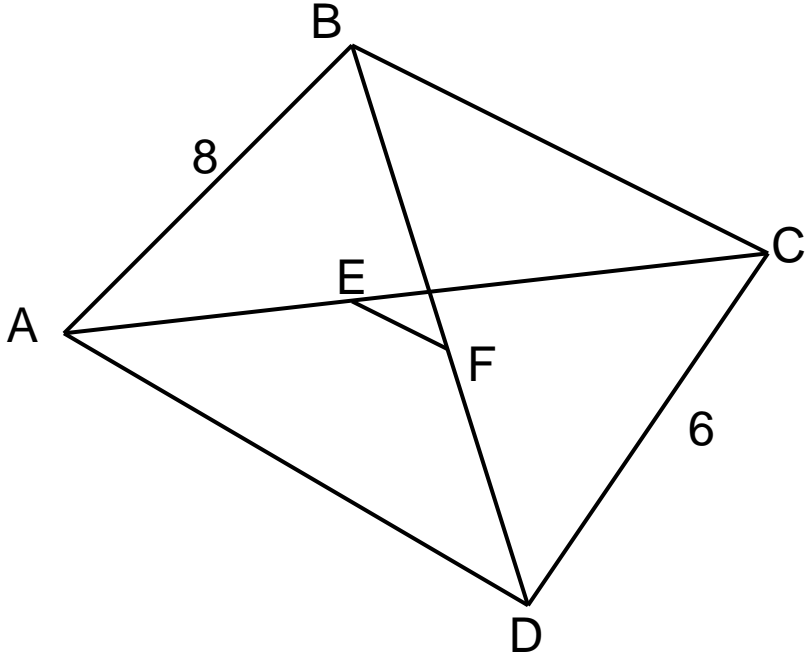


ÖRNEK



$$A(ABCD)=?$$

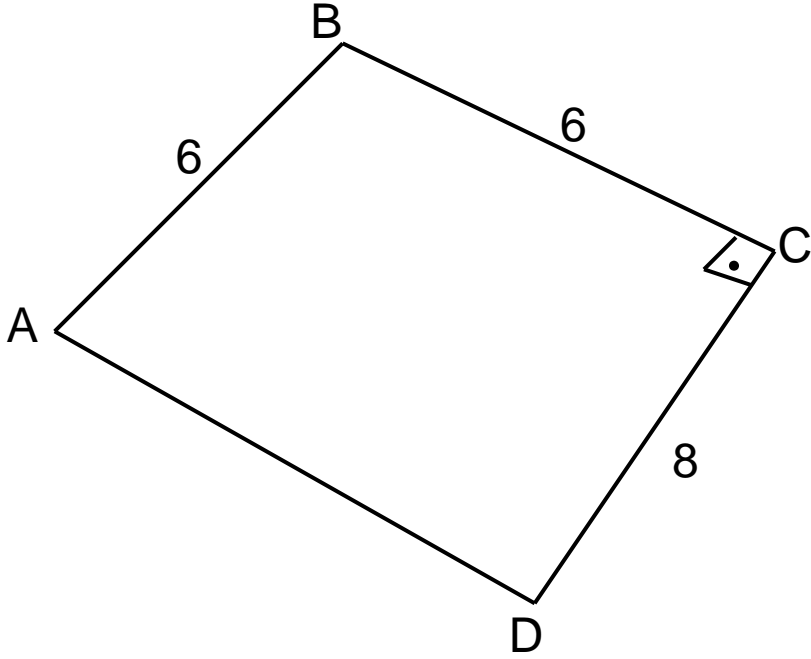
 **ÖRNEK**



E, F buldukları köşegenlerin orta noktaları olduğuna göre x kaç tane tamsayı değeri alır?



ÖRNEK



A(ABCD) nin en büyük tamsayı değeri kaçtır?=?