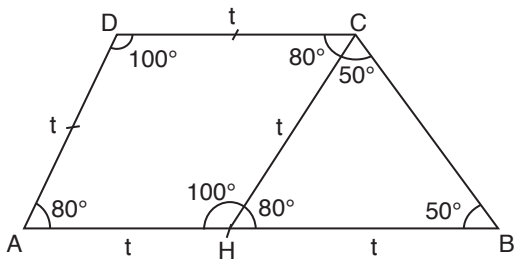
1.



|DA| // |CH| olacak şekilde |CH| çizilirse $\hat{D} = \hat{H} = 100°$

ve s($\widehat{CHB}$) = 80° olur. HCB üçgeni ikizkenar olup

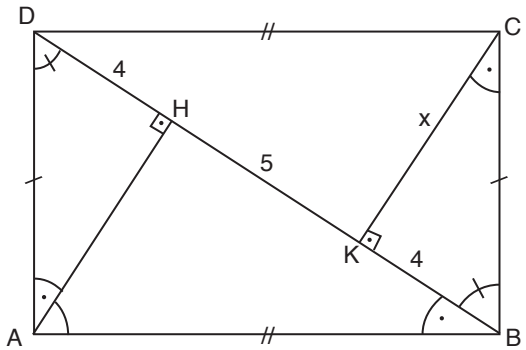
s($\widehat{HCB}$) = s($\widehat{HBC}$) = 50° olur.

U kuralından s($\widehat{DCH}$) = 80° olur.

s($\widehat{DCB}$) = 80° + 50° = 130° dir.

Cevap: A

2.



$\widehat{HDA}$ ile CKB eş üçgenlerdir.

O halde |KB| = |DH| = 4 olur.

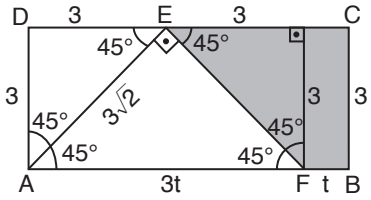
Öklid teoreminden

$x^2 = 4.9$

x = 6 olur.

Cevap: C

3.



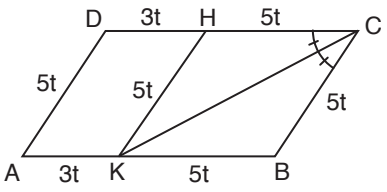
3t = 6

t = 2

Alan = $\frac{3.3}{2} + 3.2 = \frac{9}{2} + 6 = \frac{21}{2}$

Cevap: C

4.



|KH| // |BC| şeklinde |KH| çizilir.

Çevresi 26t olup 26t = 78

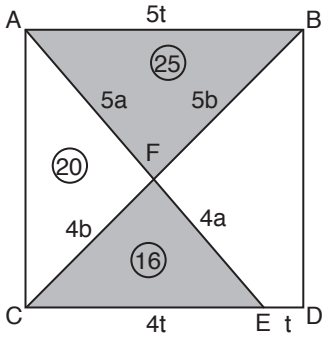
t = 3 olur.

|DC| = 8t = 8.3

= 24

Cevap: B

5.



O halde A($\widehat{DFC}$) = 20 olur.

Alan = (20 + 25).2 = 90

Taralı bölgeye kelebek benzerliği kullanılırsa

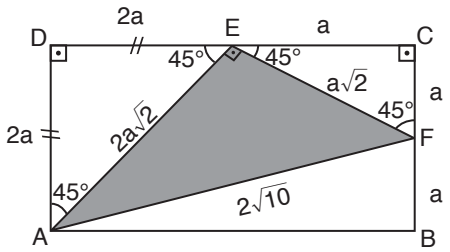
$\left(\frac{|CE|}{|AB|}\right)^2 = \frac{A(CFE)}{A(AFB)}$

$\left(\frac{4t}{5t}\right)^2 = \frac{16}{A(AFB)}$

A(ABF) = 25 olur.

Cevap: B

6.



ADE ikizkenar üçgen

$|DE| = |AD| = 2a$ ise

$|AE| = 2a\sqrt{2}$

ECF ikizkenar olup

45 – 45 – 90 üçgeninden

$|EF| = a\sqrt{2}$

EAF üçgeninden pisagor yapılırsa

$(2\sqrt{10})^2 = (2a\sqrt{2})^2 + (a\sqrt{2})^2$

$4a = 8a^2 + 2a^2$

$4a = 10a^2$

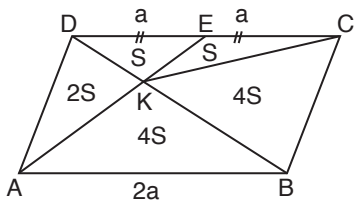
$4 = a^2$

$\boxed{2 = a}$

$A(EAF) = \frac{2a\sqrt{2}\,.a\sqrt{2}}{2} = 2a^2 = 2.2^2 = 8$

Cevap: A

7.



[AB] // [DC]

|AD] // [BC]

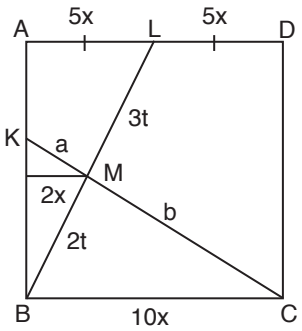
$|DE| = |EC|$

$A(ABCD) = 48\ b^2 = 125$ $\boxed{S = 4}$

$4S = 4.4 = 16$

Cevap: D

8.



$\frac{a}{a+b} = \frac{2}{10} = \frac{1}{5}$

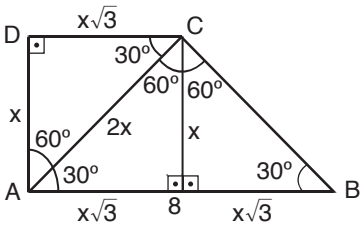
$5a = a + b$

$4a = b$

$\frac{b}{a} = 4$

Cevap: A

9.



AB // DC

AD ⊥ DC

$m(\widehat{ABC}) = 120°$

$m(\widehat{ABC}) = 30°$

$|AB| = 8$

$2x\sqrt{3} = 8$

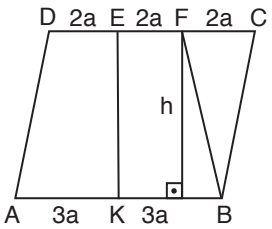
$x = \frac{8}{2\sqrt{3}} = \frac{4}{\sqrt{3}} = \frac{4\sqrt{3}}{3}$

$\text{Alan} = \frac{(x\sqrt{3}+8).x}{2} = \frac{(4+8).\frac{4\sqrt{3}}{3}}{2}$

$= 8\sqrt{3}$

Cevap: D

10.



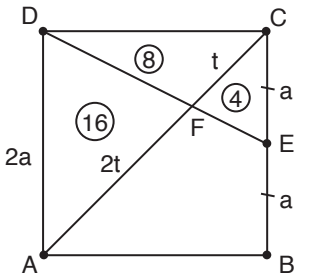
$\frac{h(5a)}{2} = 20$

$\boxed{h.a = 8}$

$\frac{9.12a}{2} = \boxed{48}$

Cevap: E

11.



$|CE| = a$ ise

$|DA| = 2a$ olur.

Kelebek benzerliğinden

$\frac{a}{2a} = \frac{1}{2}$ olur.

$\left(\frac{1}{2}\right)^2 = \frac{1}{4} = \frac{A(\widehat{CFE})}{A(\widehat{DFA})} = \frac{4}{A(\widehat{DFA})}$

$A(DFA) = 16$

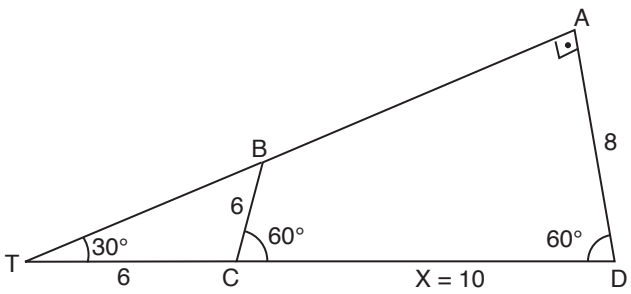
$|AF| = 2.|CF|$ olduğundan

$A(DFC) = 8$

O halde $A(ABCD) = 2.24 = 48$

Cevap: E

12.



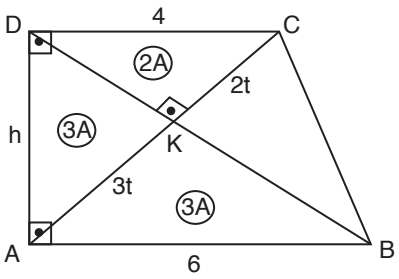
ATD üçgeni 30 – 60 – 90 üçgeni olduğundan

$|TD| = 16$ olmalı

$|CD| = 10$ olur.

Cevap: B

13.



Kelebek benzerliğinden $\frac{4}{6} = \frac{2}{3}$ olup

$A(\widehat{DKC}) = 2A$

$A(\widehat{AKB}) = 3A$

olur.

$|KC| = 2t$, $|KA| = 3t$ } $A(DAK) = 3A$ olur.

ABC üçgeninden öklid yaparsak

$h^2 = 3t.5t \Rightarrow h^2 = 15t^2$

$4^2 = 2t.5t \Rightarrow 16 = 10t^2$

} $\frac{h^2}{16} = \frac{15}{10}$

$\frac{h^2}{16} = \frac{3}{2}$

$h^2 = 24$

$\boxed{h = 2\sqrt{6}}$

$5A = \frac{h.4}{2}$

$5A = \frac{2\sqrt{6}.4}{2}$

$A = \frac{4\sqrt{6}}{5}$

$A(ABCD) = \frac{(4+6)2\sqrt{6}}{2} = 106$

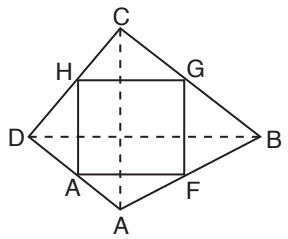
$A(DKC) = 2A = 2.\frac{4\sqrt{6}}{5} = \frac{8\sqrt{6}}{5}$

} $\frac{10\sqrt{6}}{\frac{8\sqrt{6}}{5}} = \frac{50}{8}$

$= \frac{25}{4}$

Cevap: D

14.

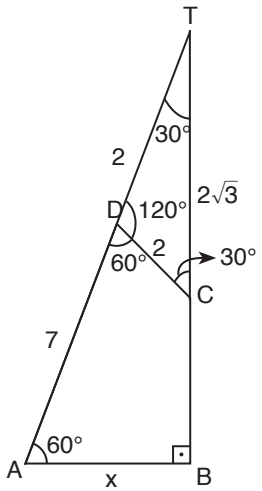


İçerideki dörtgenin çevresi köşegenler toplamıdır.

Ç(EFGH) = 13 + 17 = 30

Cevap: D

15.



TDC üçgeni 120 – 30 – 30 üçgenidir.

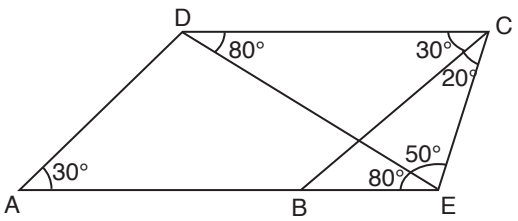
TAB üçgeni 30 – 60 – 90 üçgenidir.

O halde

$x = \frac{9}{2}$ olur.

Cevap: C

16.



DC ile AB paralel olup $m(\widehat{DEA}) = 80°$ ve

$|DC| = |DE|$ olup ikizkenar üçgen vardır.

$m(\widehat{DCE}) = m(\widehat{DEC}) = 50$ olur.

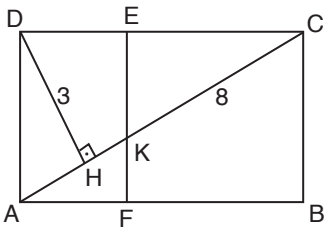
$m(\widehat{DCB}) = 30$ olur.

$x = 30$

Çünkü ABCD paralelkenar ve karşılıklı açıları birbirine eşittir.

Cevap: B

17.



$(5a)^2 = 3^2 + n^2$

$25a^2 = 10$

$a^2 = \frac{2}{5} \Rightarrow a = \sqrt{\frac{2}{5}}$

$\Rightarrow 4 = t^2 + \frac{2}{5}$

$4 - \frac{2}{5} = t^2$

$\frac{18}{5} = t^2$

$\frac{3\sqrt{2}}{\sqrt{5}} = t$

Alan = 4t.5a

$= 20.3.\frac{2}{5}$

$= 24$

$64 = 16x^2 + 16a^2$

$h = t^2 + a^2$

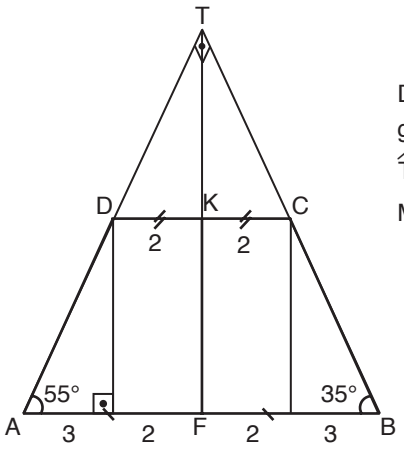
$|AK| = 2$

$3^2 = n.(10 - n)$

$\boxed{n = 1}$

Cevap: C

18.



D ve C uzatılarak üçgen elde edildiğinde

$\hat{T} = 90°$ olur.

Muhteşem üçlüden

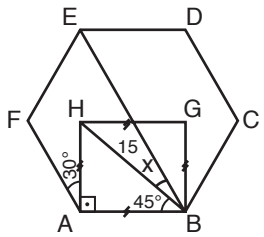
$|TK| = 2$ ve

$|TF| = 5$ olup

$|KF| = 3$ olur.

Cevap: A

19.



$m(\widehat{FAH}) = 30$

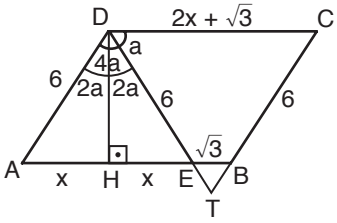
$m(\widehat{HBA}) = 45$

$x + 45 = 60$

$x = 5$

Cevap: C

20.



DAE ikizkenar üçgen olduğundan indirilen yükseklik açıortay ve kenarortay olur.

DC ile AB paralel olduğundan $m(\widehat{DEA}) = a$

$90 + 2a + a = 180$

$a = 30$

DHE üçgeni 30 - 60 - 90 üçgeni olup

$|HE| = 3\sqrt{3} = |AH|$

Paralelkenarın alanı $3.7\sqrt{3} = 21\sqrt{3}$

Cevap: A