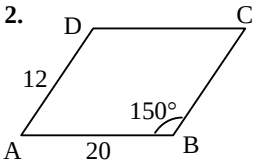
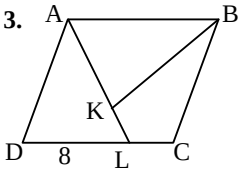
1. If the perimeter of a square is $16\sqrt{3}$, then find the area of this square.

A) 48 B) 64 C) 128 D) 192 E) 210

2. 

In the given figure, ABCD is a parallelogram, $|AD| = 12$, $|AB| = 20$ and $m(\hat{B}) = 150°$. Find the area of ABCD.

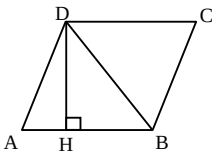
A) $60\sqrt{3}$ B) $75\sqrt{3}$ C) 120 D) 240 E) 300

3. 

In the parallelogram ABCD, $|DL| = 8$, $|AK| = 2|KL|$, $A(\overset{\Delta}{ADL}) = A(\overset{\Delta}{AKB})$ are given. Find $|AB|$.

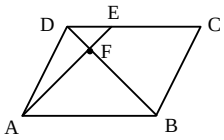
A) 10 B) 12 C) 14 D) 15 E) 16

4. The area of the rhombus *ABCD* is 24 cm^2. If $[DH] \perp [AB]$ and $|BD| = 6$ cm, find $|DH|$.



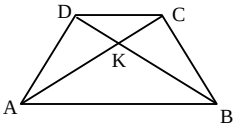
A) 2.4 B) 3.6 C) 4 D) 4.8 E) 5

5. The area of the parallelogram *ABCD* is 120 cm^2. If $|CD| = 5 \cdot |DE|$, find $A(\overset{\Delta}{FAB})$.



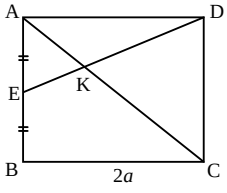
A) 42 B) 46 C) 48 D) 50 E) 56

6. The area of the trapezoid *ABCD* is 50 cm^2. If $\frac{|DC|}{|AB|} = \frac{2}{3}$, find $A(\overset{\Delta}{AKD})$.



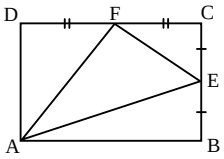
A) 6 B) 8 C) 12 D) 16 E) 18

7. In the square *ABCD*, *E* is the midpoint of the side [*AB*]. Find $A(\overset{\Delta}{AKD})$



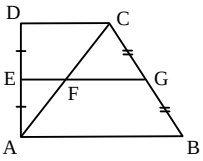
A) a^2 B) $\frac{3a^2}{2}$ C) $\frac{2a^2}{3}$ D) $\frac{a^2}{2}$ E) $\frac{a^2}{6}$

8. Perimeter of the rectangle *ABCD* is 28 cm. *E* and *F* are the midpoints. If $A(\overset{\Delta}{AEF}) = 18$ cm^2, find the length of the diagonals of the rectangle.



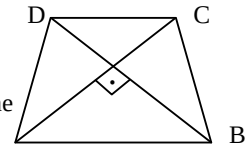
A) 6 B) 7 C) 8 D) 10 E) 12

9. In the figure, *ABCD* is a right trapezoid. If triangle *ABC* is equilateral, find $\frac{A(ABCD)}{A(AEF)}$.

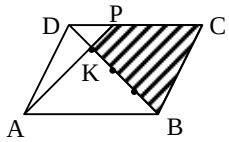


A) 6 B) 8 C) 9 D) 12 E) 18

10. In the given figure, ABCD is an isosceles trapezoid, and $AC \perp BD$. If $3|AB| = 5|DC| = 30$, find the area of the trapezoid.



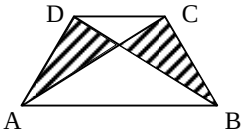
A) 30 B) 36 C) 48 D) 54 E) 64

11. 

In the given figure, ABCD is a parallelogram and the diagonal BD is divided into four equal parts. Find the ratio between the area of the parallelogram ABCD and the area of the shaded region.

A) $\frac{24}{11}$ B) $\frac{36}{17}$ C) $\frac{32}{15}$ D) $\frac{20}{9}$ E) 3

12. In the given figure, AB//CD and $4|DC| = |AB|$. If A(ABCD) = 75 cm^2, find the sum of the areas of the shaded regions.



A) 12 B) 15 C) 24 D) 25 E) 30