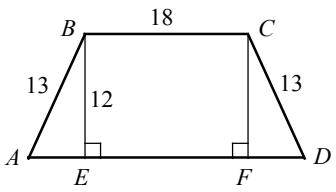
Chapter 18 Practice Test

1



What is the area of the isosceles trapezoid above?

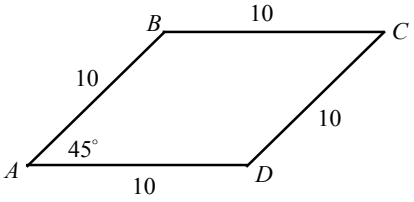
A) 238

B) 252

C) 276

D) 308

2



What is the area of rhombus $ABCD$ above?

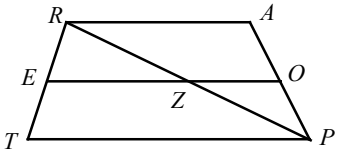
A) $20\sqrt{2}$

B) $25\sqrt{2}$

C) $50\sqrt{2}$

D) $100\sqrt{2}$

3

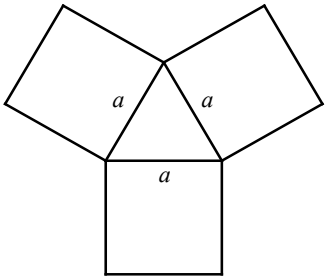


In the figure above, $\overline{EO}$ is the midsegment of trapezoid $TRAP$ and $\overline{RP}$ intersect $\overline{EO}$ at point Z. If $RA = 15$ and $EO = 18$, what is the length of $\overline{EZ}$?

4

A rectangle has a length that is 6 meters more than twice its width. What is the perimeter of the rectangle if the area of the rectangle is 1,620 square meters?

5



The figure above shows an equilateral triangle with sides of length a and three squares with sides of length a. If the area of the equilateral triangle is $25\sqrt{3}$, what is the sum of the areas of the three squares?

A) 210

B) 240

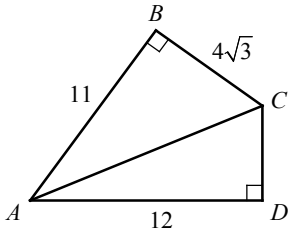
C) 270

D) 300

6

The perimeter of a rectangle is $5x$ and its length is $\frac{3}{2}x$. If the area of the rectangle is 294, what is the value of x?

7



In the figure above, what is the area of the region $ABCD$?

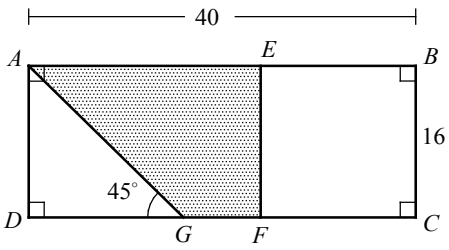
A) $22\sqrt{3}+30$

B) $22\sqrt{3}+36$

C) $22\sqrt{3}+42$

D) $22\sqrt{3}+48$

8



In the figure above, $ABCD$ is a rectangle and $BCFE$ is a square. If $AB=40$, $BC=16$, and $m\angle AGD=45$, what is the area of the shaded region?

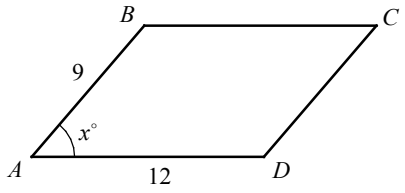
A) 240

B) 248

C) 256

D) 264

9



The figure above shows parallelogram $ABCD$. Which of the following equations represents the area of parallelogram $ABCD$?

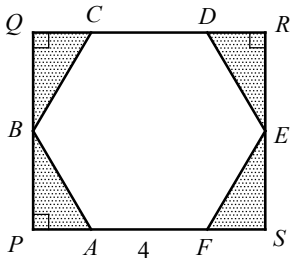
A) $12\cos x^\circ \times 9\sin x^\circ$

B) $12\times 9\tan x^\circ$

C) $12\times 9\cos x^\circ$

D) $12\times 9\sin x^\circ$

10



In the figure above, $ABCDEF$ is a regular hexagon with side lengths of 4. $PQRS$ is a rectangle. What is the area of the shaded region?

A) $8\sqrt{3}$

B) $9\sqrt{3}$

C) $10\sqrt{3}$

D) $12\sqrt{3}$