

Answers

DIRECTIONS: Place your answers in the given blanks. Show work. Remember to label your answers with correct units of measure when necessary! Leave answers in exact terms (using radicals, if necessary).

Reference Information

$A = \pi r^2$
 $C = 2\pi r$

$A = \ell w$

$A = \frac{1}{2}bh$

$V = \ell wh$

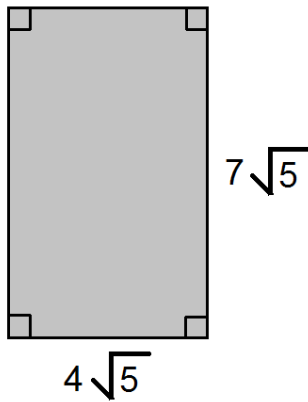
$V = \pi r^2 h$

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

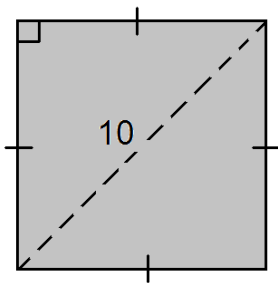
Special Right Triangles
 30°-60°-90°: sides $x, \sqrt{3}x, 2x$
 45°-45°-90°: sides $s, s, \sqrt{2}s$

The number of degrees of arc in a circle is 360.
 The measure in degrees of a straight angle is 180.
 The sum of the measures in degrees of the angles of a triangle is 180.

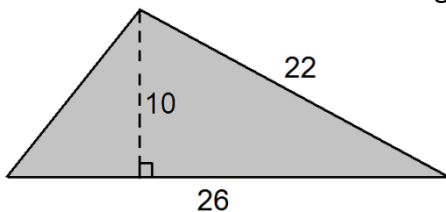
1. What is the area of the shaded region of the diagram? **140**



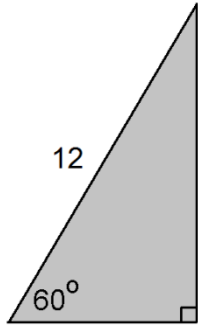
2. What is the area of the shaded region of the diagram? **50**



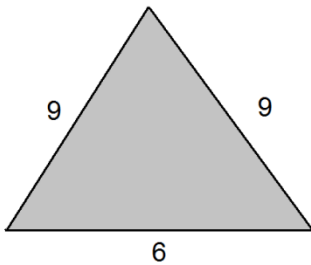
3. What is the area of the shaded region of the diagram? **130**



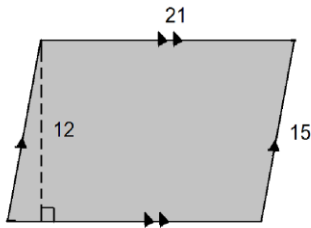
4. What is the area of the shaded region of the diagram? $18\sqrt{3}$



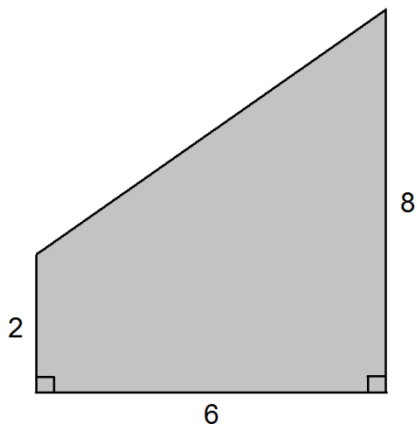
5. What is the area of the shaded region of the diagram? $18\sqrt{2}$



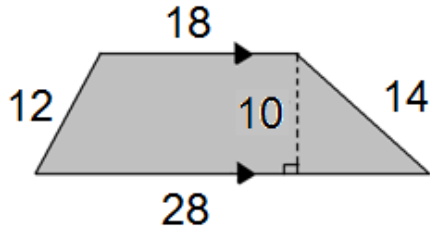
6. What is the area of the shaded region of the diagram? 252



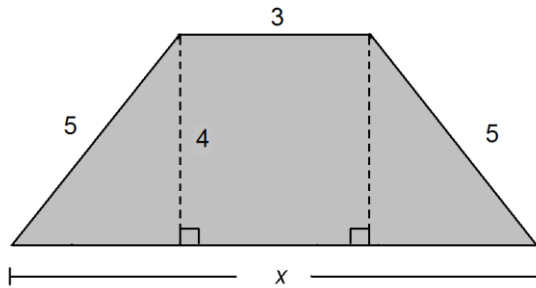
7. What is the area of the shaded region of the diagram? 30



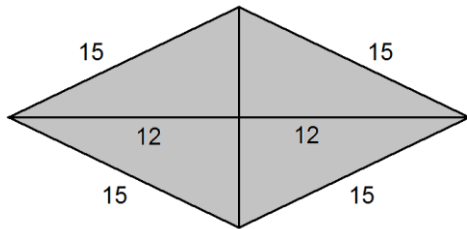
8. What is the area of the shaded region of the diagram? **230**



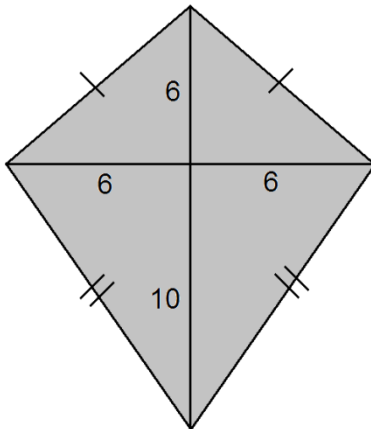
9. What is x ? **9**
 What is the area of the shaded region of the diagram? **24**



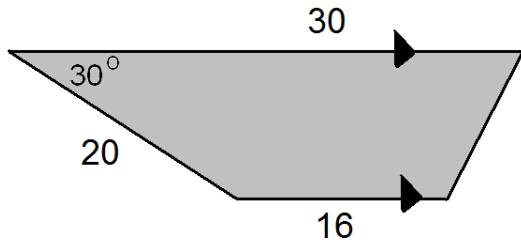
10. What is the area of the shaded region of the diagram? **216**



11. What is the area of the shaded region of the diagram? **96**



12. What is the area of the shaded region of the diagram? **230**

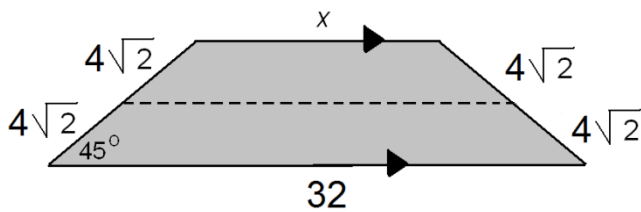


13. What is the median? **24**

What is the height? **8**

What is x ? **16**

What is the area of the shaded region of the diagram? **192**

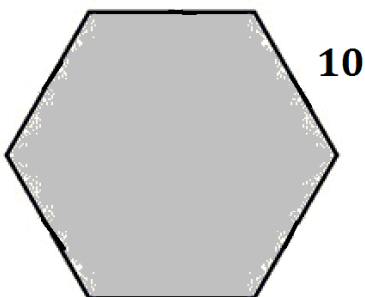


14. The following diagram is a regular hexagon with a side of 10.

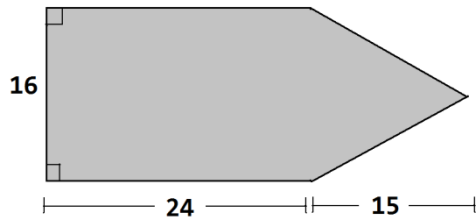
What is the radius? **10**

What is the apothem? **$5\sqrt{3}$**

What is the area of the shaded region of the diagram? **$150\sqrt{3}$**



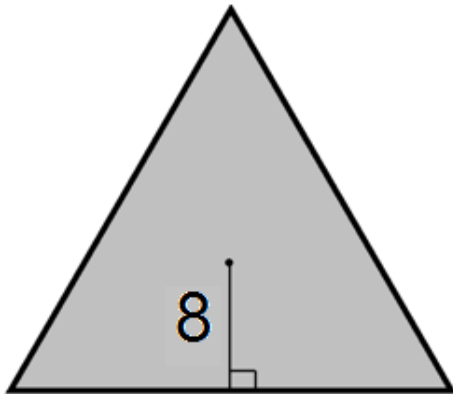
15. Find the area of the shaded region of the diagram. **504**



16. The following diagram is an equilateral triangle with apothem of 8.

What is the radius? **16**

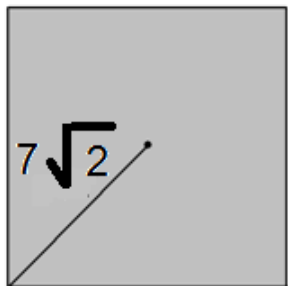
What is the area of the shaded region of the diagram? **$192\sqrt{3}$**



17. The following diagram is square with radius of $7\sqrt{2}$.

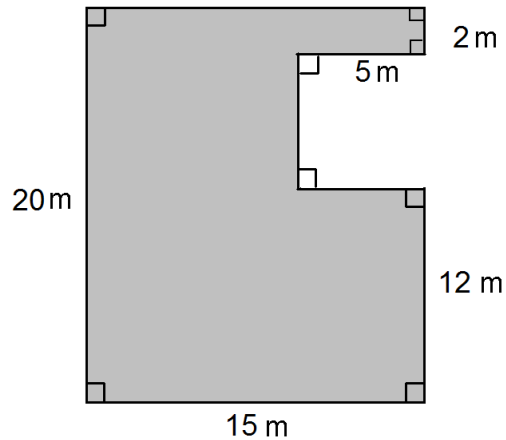
What is the apothem? **7**

What is the area of the shaded region of the diagram? **196**



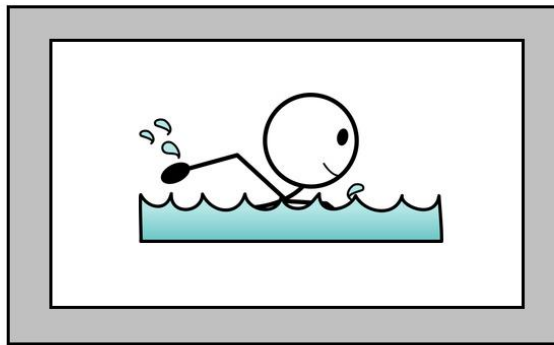
18. Shantil’s driveway is shown in the following diagram. She is going to pay \$21 per square meter to have the driveway covered in asphalt. How much will Shantil have to pay for the asphalt?

\$5670



19. A 30 ft x 18 ft swimming pool is surrounded by a 2 ft wide concrete sidewalk. What is the area of the sidewalk?

208 ft²



20. The length of a rectangle is 3 cm less than three times the width. The perimeter of the rectangle is 106 cm. What is the area of the rectangle?

492 cm²