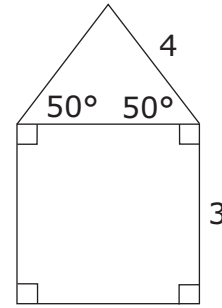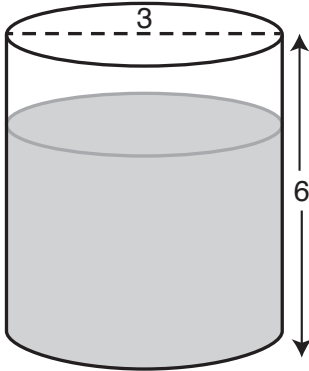# Geometry Drill

You can check your answers in Part VIII: Answer Key to Drills.

1. The cylindrical glass above is filled $\frac{3}{4}$ with water. What volume of water is in the glass, rounded to the nearest unit?

   A. 170
   B. 127
   C. 42
   D. 32

2. The radius of a circular traffic island is 7 feet. What is the approximate area of the traffic island?

   A. 154
   B. 148
   C. 21
   D. 15

3. The figure above shows a square attached to a triangle. If the triangle is isosceles, what is the perimeter of the <u>entire</u> figure?

   A. 12
   B. 17
   C. 20
   D. 34

4. A three-sided figure has sides in a ratio of 2 : 2 : 1. What type of figure is this?

   A. an equilateral triangle
   B. a square
   C. an isosceles triangle
   D. Not enough information is given.

5. If a cube has a volume of 27, which of the following is the length of one side of the cube?

   A. 3
   B. 9
   C. 81
   D. 144

6. An isosceles triangle has one internal angle of 45 degrees. What is the sum of the other two interior angles?

   A. 180 degrees
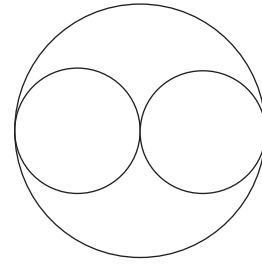   B. 135 degrees
   C. 90 degrees
   D. 45 degrees

7. A rectangular flower garden has an area of 168 square feet. If the width of the garden is 12 feet, then what is the length of the garden?
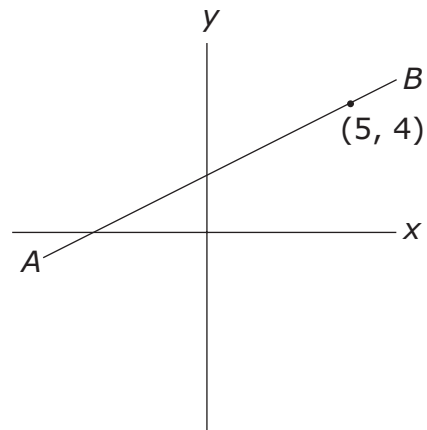
   A. 23
   B. 20
   C. 15
   D. 14
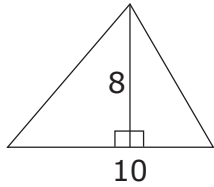
8. The triangle above has a base of 10 and a height of 8. Which of the following expressions gives the area of the triangle?

   A. $\frac{1}{2}(10)(8)$

   B. $2(10 + 8)$

   C. $\frac{1}{2}(10 + 8)$

   D. $\frac{1}{2}(10 - 8)$

9. Two circles with identical radii are inscribed inside a third circle, as shown above. If the diameter of the large circle is 20, what is the radius of one of the small circles?

   A. 40
   B. 20
   C. 10
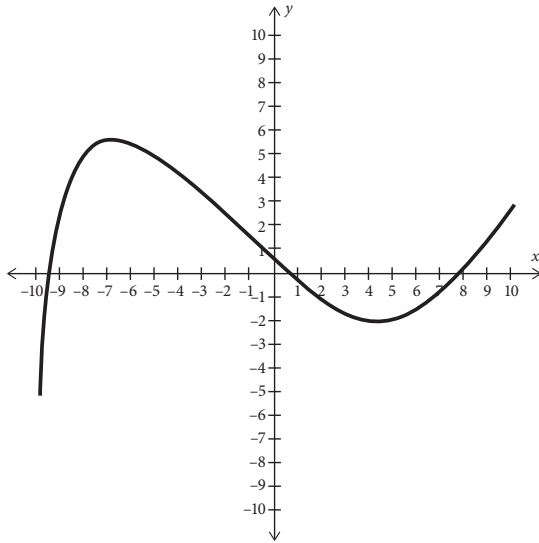   D. 5

10. Point (5, 4) is on line *AB* as shown. Which of the following represents the slope of line *AB*?

   A. $\frac{4}{5}$

   B. $\frac{5}{4}$

   C. $\frac{4 \pm 5}{5 - 4}$

   D. Not enough information is given.

11. Which of the following represents the equation of a line that goes through the points (1, 2) and (−2, 8)?

   A. $y = -2x - 4$
   B. $y = -2x + 4$
   C. $y = 2x + 4$
   D. $y = 2x - 4$

12. Which of the following intervals on the above graph is positive?

   A. $-9.5 < x < 1$ and $x > 8$
   B. $x < -9.5$ and $1 < x < 8$
   C. $x < -6.5$ and $x > 4$
   D. $-6.5 < x < 4$

13. A regular hexagon has an area of $24\sqrt{3}$.

   If the area of a regular hexagon can be computed using the formula $A = \dfrac{3\sqrt{3}}{2}s^2$, where s is the side of the hexagon, what is the perimeter of the hexagon?

   A.   2
   B.   4
   C.   16
   D.   24