6 Chapter Review

Review Key Vocabulary

circle, *p. 240*   diameter, *p. 240*   semicircle, *p. 242*
center, *p. 240*   circumference, *p. 241*   composite figure, *p. 248*
radius, *p. 240*   pi, *p. 241*

Review Examples and Exercises

6.1 Circles and Circumference (pp. 238–245)

Find the circumference of the circle. Use 3.14 for π.
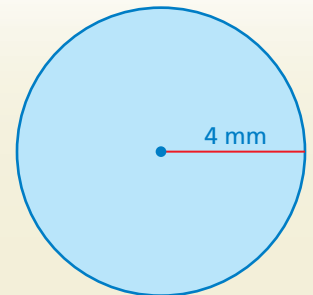
The radius is 4 millimeters.

$C = 2\pi r$ Write formula for circumference.

$\approx 2 \cdot 3.14 \cdot 4$ Substitute 3.14 for π and 4 for r.

$= 25.12$ Multiply.

The circumference is about 25.12 millimeters.

Exercises
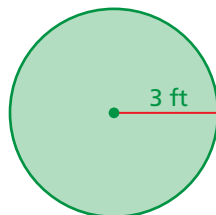
Find the radius of the circle with the given diameter.

1. 8 inches   2. 60 millimeters

3. 100 meters   4. 3 yards

Find the diameter of the circle with the given radius.

5. 20 feet   6. 5 meters

7. 1 inch   8. 25 millimeters

Find the circumference of the circle. Use 3.14 or $\dfrac{22}{7}$ for π.
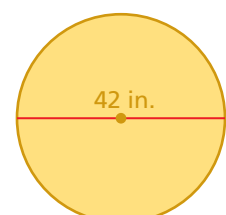
9.   10.   11.

The figure is made up of a semicircle and a square. Find the perimeter. Use 3.14 for π.

The distance around the square part is $6 + 6 + 6 = 18$ meters. The distance around the curved part is one-half the circumference of a circle with $d = 6$ meters.

$$\frac{C}{2} = \frac{\pi d}{2}$$ Divide the circumference by 2.

$$\approx \frac{3.14 \cdot 6}{2}$$ Substitute 3.14 for π and 6 for d.
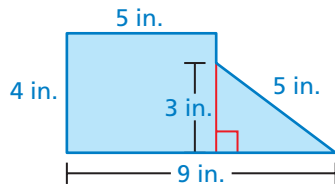
$$= 9.42$$ Simplify.

6 m

The perimeter of the figure is about $18 + 9.42 = 27.42$ meters.
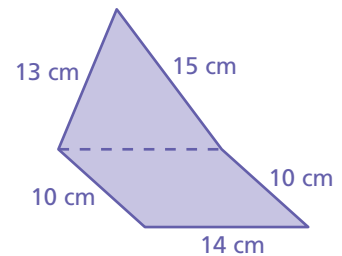
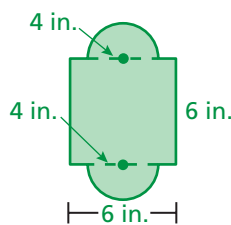### Exercises

Find the perimeter of the figure.

12.
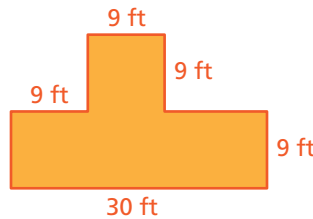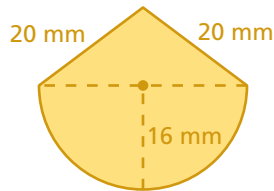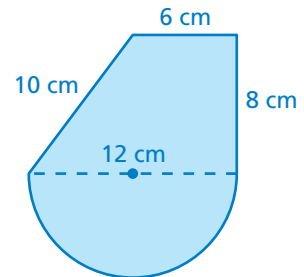
5 in.

4 in.   5 in.

3 in.

9 in.

13.

9 ft

9 ft

9 ft

9 ft

30 ft

14.

13 cm   15 cm

10 cm   10 cm

14 cm

15.

20 mm   20 mm

16 mm

16.

4 in.

4 in.   6 in.

6 in.

17.

6 cm

10 cm   8 cm

12 cm

Find the area of the circle. Use 3.14 for π.

$$A = \pi r^2$$ Write formula for area.

$$\approx 3.14 \cdot (20)^2$$ Substitute 3.14 for π and 20 for r.
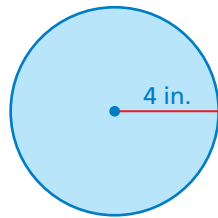
$$= 1256$$ Multiply.

40 yd
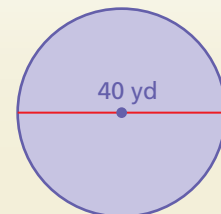
The area of the circle is about 1256 square yards.

Exercises

Find the area of the circle. Use 3.14 or $\frac{22}{7}$ for π.
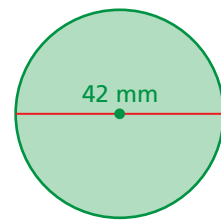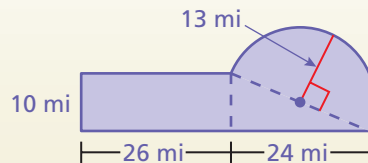
18.

4 in.

19.

11 cm

20.

42 mm
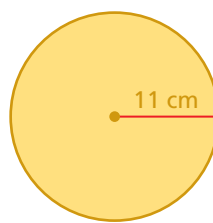
6.4 **Areas of Composite Figures** *(pp. 260–265)*

Find the area of the figure.

13 mi

10 mi

26 mi · 24 mi

The figure is made up of a rectangle, a triangle and a semicircle.
Find the area of each figure.

Area of rectangle

$A = \ell w$

$= (26)(10)$

$= 260$

Area of triangle

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

$= \frac{1}{2}(10)(24)$

$= 120$

Area of semicircle

$A = \frac{\pi r^2}{2}$

$\approx \frac{3.14 \cdot (13)^2}{2}$

$= 265.33$

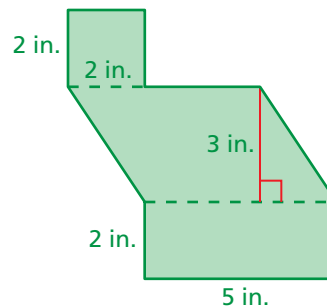So, the area of the figure is about $260 + 120 + 265.33 = 645.33$ square miles.

Exercises

Find the area of the figure.

21.

4 in.

10 in.

22.

2 in.

2 in.

3 in.

2 in.

5 in.

23.

6 ft

5 ft   4 ft   5 ft