4.1 Perimeter
MATHPOWER™ Seven, pp. 124–125

The perimeter of a figure is the distance around it.

\[ P = 2.5 + 6 + 3.5 + 8 = 20 \]

The perimeter is 20 cm.

State the best unit of measurement for each perimeter.

1. a football field
2. a provincial park
3. a placemat
4. the school parking lot
5. a calculator key

Complete each statement.

6. 420 cm = \underline{4.2} m
7. 1700 m = \underline{1.7} km
8. 650 mm = \underline{65} cm
9. 8.3 km = \underline{8300} m
10. 5.6 m = \underline{560} cm

Estimate, then measure each side of each figure. Calculate each perimeter.

11. \[ P = \underline{31} \]
12. \[ P = \underline{26} \]
13. \[ P = \underline{29.8} \]
14. \[ P = \underline{25} \]
15. \[ P = \underline{48} \]
16. \[ P = \underline{38} \]
17. \[ P = \underline{4.3} \]
18. \[ P = \underline{5.6} \]
4.6 Area of a Rectangle and Square

MATHPOWER™ Seven, pp. 138–139

The area of a figure is the measure of its surface.

In a rectangle, \( A = l \times w \)

\( \begin{array}{c} l \text{ cm} \hfill \\
\hline 4 \text{ cm} \hfill \\
\hline w \text{ cm} \hfill \end{array} \)

In a square, \( A = s^2 \)

\( \begin{array}{c} \text{s cm} \\
\hline \text{s cm} \end{array} \)

State the best unit of measurement for each area.

1. a picnic tabletop
2. a driveway
3. this page
4. Hudson Bay
5. a postage stamp

Estimate, then calculate the area of each rectangle.

6. \( A = \quad \) cm²

7. \( A = \quad \) cm²

Estimate, then calculate the area of each square.

8. \( A = \quad \) cm²

9. \( A = \quad \) cm²

Calculate the area of each rectangle.

10. \( A = \quad \) cm²

11. \( A = \quad \) cm²

12. \( A = \quad \) cm²

13. \( A = \quad \) cm²

Calculate the area of each square.

14. \( A = \quad \) cm²

15. \( A = \quad \) cm²

16. \( A = \quad \) cm²

17. \( A = \quad \) cm²

18. \( A = \quad \) cm²

19. \( A = \quad \) cm²

20. \( A = \quad \) cm²

21. \( A = \quad \) cm²

22. \( A = \quad \) cm²

23. \( A = \quad \) cm²
4.10 Area of a Triangle
MATHPOWER™ Seven, pp. 146–147

Every triangle has a base and height. Another name for height is altitude.

The area of a triangle is
\[ A = \frac{1}{2} \times b \times h. \]

Calculate the area of each triangle.

1. 
   \[
   \begin{array}{c}
   \text{8 cm} \\
   \text{15 cm}
   \end{array}
   \]

2. 
   \[
   \begin{array}{c}
   \text{6.5 cm} \\
   \text{20 cm}
   \end{array}
   \]

3. 
   \[
   \begin{array}{c}
   \text{12 cm} \\
   \text{4 cm}
   \end{array}
   \]

Measure the base and height of each triangle to the nearest tenth of a centimetre. Calculate each area.

11. 

12. 

13. 

14. 

Find the missing measure.

15. 

\[ A = 38.8 \text{ cm}^2 \]

\[ b = \text{_________} \]

\[ h = \text{_________} \]

\[ A = \text{54 m}^2 \]

\[ b = \text{_________} \]

\[ h = \text{_________} \]
Calculate the perimeter of each figure.

1. \[ \text{Circumference of a circle} = 2\pi r \]

2. \[ \text{Perimeter of a rectangle} = 2(l + w) \]

3. \[ \text{Perimeter of a rectangle} = 2(l + w) \]

Calculate the perimeter and area of each figure.

8. \[ \text{Perimeter of a rectangle} = 2(l + w) \]

9. \[ \text{Perimeter of a trapezoid} = a + b + c + d \]

10. A circular flower garden is 2.5 m in diameter. Jared wants to put a strip of lawn edging around the outside edge of the garden. What length of lawn edging does he need?

11. The largest movie screen in the world is in Jakarta, Indonesia. It measures 28.3 m by 21.5 m. What is the area of the screen?