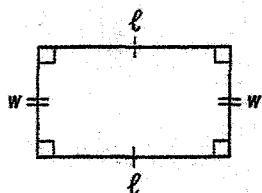


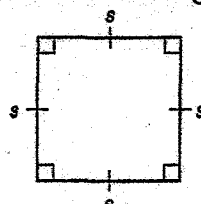
6 Perimeter and Area of Squares and Rectangles

Perimeter is the distance around a geometric figure. Perimeter is measured in linear units.

- To find the perimeter of a rectangle, multiply two times the sum of the length and width, or $2(\ell + w)$.
- To find the perimeter of a square, multiply four times the length of a side, or $4s$.



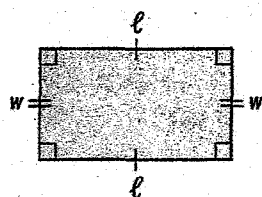
$$P = 2(\ell + w) \text{ or } 2\ell + 2w$$



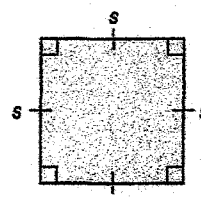
$$P = 4s$$

Area is the number of square units needed to cover a surface. Area is measured in square units.

- To find the area of a rectangle, multiply the length times the width, or $\ell \cdot w$.
- To find the area of a square, find the square of the length of a side, or s^2 .



$$A = \ell w$$



$$A = s^2$$

Exercises Find the perimeter and area of each figure.

1. perimeter = $2\ell + 2w$
 $= 2(3) + 2(2)$
10 Yes or NO
 Area = $\ell \cdot w$
 $= 3 \cdot 2$

perimeter = $4s$
 $= 4(1)$
5 Yes or NO
 Area = s^2
 $= (1)^2$

3. perimeter = $2\ell + 2w$
 $= 2(7) + 2(1)$
16 Yes or NO
 Area = $\ell \cdot w$
 $= 7 \cdot 1$
7 Yes or NO

perimeter = $4s$
 $= 4(7)$
16 Yes or NO
 Area = s^2
 $= 7^2$
49 Yes or NO

5. a rectangle with length 6 feet and width 4 feet

perimeter = $2\ell + 2w$
 $= 2(6) + 2(4)$
20 Yes or NO
 Area = $\ell \cdot w$
 $= 6 \cdot 4$

perimeter = $4s$
 $= 4(6)$
10 Yes or NO
 Area = s^2
 $= 6^2$

6. a rectangle with length 12 centimeters and width 9 centimeters

perimeter = $2\ell + 2w$
 $= 2(12) + 2(9)$

Area = $\ell \cdot w$
 $= 12 \cdot 9$

7. a square with length 3 meters

perimeter = $4s$
 $= 4(3)$

Area = s^2
 $= 3^2$

8. a square with length 15 inches

perimeter = $4s$
 $= 4(15)$
60 Yes or NO

Area = s^2
 $= 15^2$
225 Yes or NO