

Area and Perimeter of Rectangles and Squares

Warmup

1. Polygon Identification

2.

$1^2 =$ _____	$9^2 =$ _____
$2^2 =$ _____	$10^2 =$ _____
$3^2 =$ _____	$11^2 =$ _____
$4^2 =$ _____	$12^2 =$ _____
$5^2 =$ _____	$13^2 =$ _____
$6^2 =$ _____	$14^2 =$ _____
$7^2 =$ _____	$15^2 =$ _____
$8^2 =$ _____	

3.

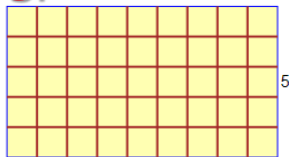
$$\begin{aligned}6 - 5 &= \underline{\quad\quad}\\-7 - -2 &= \underline{\quad\quad}\\-1 - 8 &= \underline{\quad\quad}\\-9 - 3 &= \underline{\quad\quad}\end{aligned}$$

4.

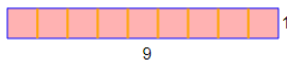
$$\begin{aligned}4 + 7 &= \underline{\quad\quad}\\6 + -5 &= \underline{\quad\quad}\\-8 + -10 &= \underline{\quad\quad}\\-10 + 6 &= \underline{\quad\quad}\end{aligned}$$

5.

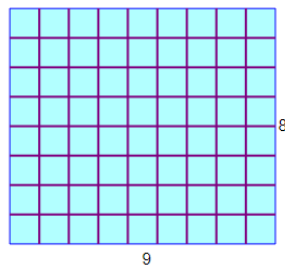
$$9 \times 5 = \underline{\quad\quad}$$



$$9 \times 1 = \underline{\quad\quad}$$



$$9 \times 9 = \underline{\quad\quad}$$



Lesson #

Date

- I. Rectangles and Squares
- II. Area of Rectangles

Homeschool



Honor Roll

Learn ~ Persevere ~ Succeed

Pre-Algebra and Geometry I

Wendy Harper

www.HsHonorRoll.com

I. Rectangles and Squares

Congruent: Equal in measure (The symbol on the computer is $\equiv$ hand written is $\cong$)

What is a rectangle?

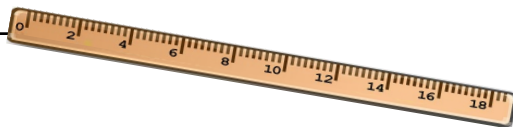


What is a square?



What is used to measure distance? _____

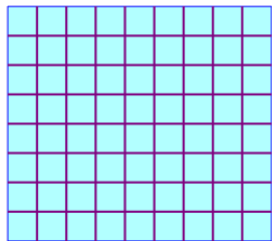
Units for measuring distance:



Area:

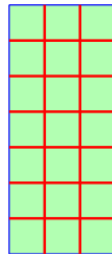
Area is the amount of square units of surface in a geometric figure.

II. Area of Rectangles



8 inches

9 inches



7 inches

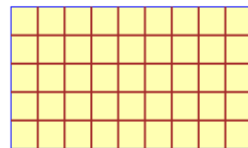
3 inches

Formula for Area of a Rectangle:

1. Write the formula.
2. Substitute in the known values.
3. Simplify
4. Use Square units.

Area = length x width

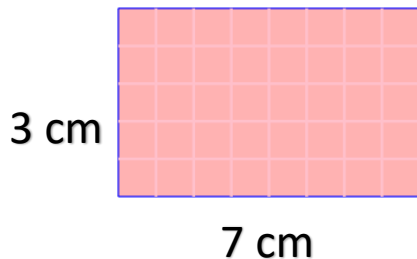
$$A = lw$$



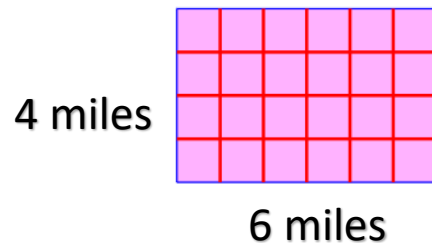
width

length

**Calculate the Area of a rectangle with
length= 7cm and width = 3 cm**



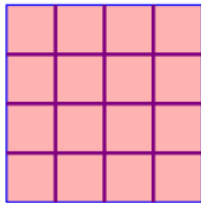
**Calculate the Area of a rectangle with
length= 6 miles and width = 4 miles**



8. Calculate the Area of each Rectangle

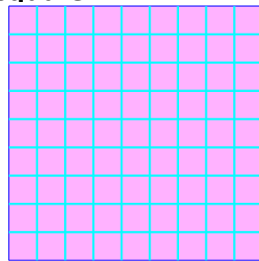
III. Area of Squares

Calculate the Area of a square with side = 4 inches.



4 inches

Calculate the Area of a square with side = 9 inches.



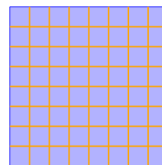
9 inches

Formula for Area of a Square:

1. Write the formula.
2. Substitute in the known values.
3. Simplify
4. Use Square units.

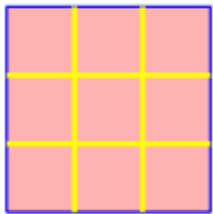
$$\text{Area} = \text{side}^2$$

$$A = s^2$$



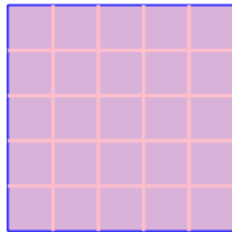
side

Calculate the Area of a square when the side equals 6 miles.



6 miles

Calculate the Area of a square with each side equal to 5 miles



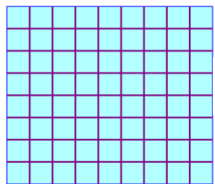
5 miles

9. Calculate the Area of each Square

IV. Perimeter of Rectangles

Perimeter: Perimeter is the distance around a geometric figure.

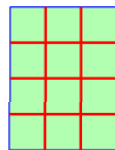
Calculate the Perimeter



8 inches

9 inches

Calculate the Perimeter

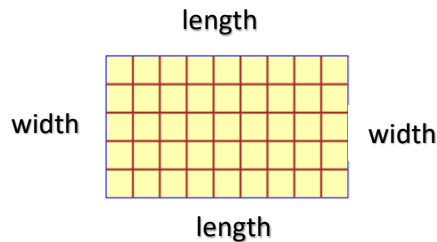


4 miles

3 miles

Formula for Perimeter of a Rectangle:

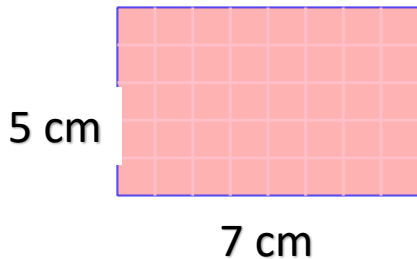
1. Write the formula.
2. Substitute in the known values.
3. Simplify
4. Write the units.



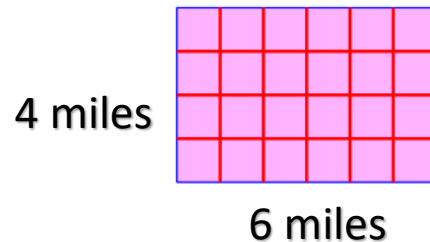
Perimeter = length + length + width + width

$$P = 2l + 2w = \underline{\hspace{2cm}}$$

**Calculate the Perimeter of a rectangle
with length= 7cm and width = 5 cm**



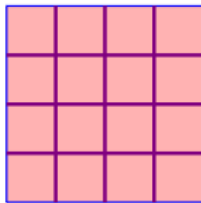
**Calculate the Perimeter of a rectangle
with length= 6 miles and width = 4
miles**



10. Calculate the Perimeter of each Rectangle

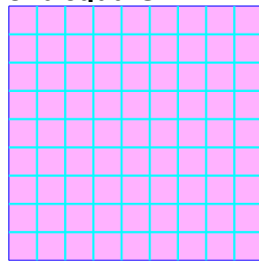
V. Perimeter of Squares

Calculate the Perimeter of a square with side = 4 inches.



4 inches

Calculate the Perimeter of a square with side = 9 inches.



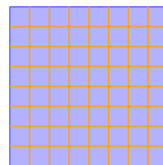
9 inches

Formula for Perimeter of a Square:

1. Write the formula.
2. Substitute in the known values.
3. Simplify
4. Write the units.

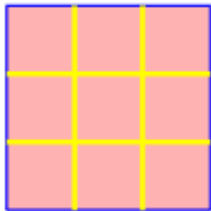
$$\text{Perimeter} = 4 \times \text{side}$$

$$P = 4s$$



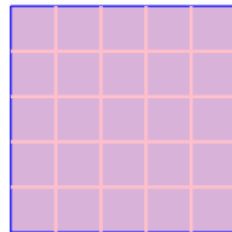
side

Calculate the Perimeter of a square when the side equals 6 miles.



6 miles

Calculate the Perimeter of a square with side = 5 miles.



5 miles

11. Calculate the Area of each Square

VI. Word Problems with Perimeter and Area

The perimeter of a square is 40 meters.
What is the length of each side?

To solve perimeter and area problems:

1. Write the formula.
2. Substitute in the known values.
3. Solve for the unknown amount
4. Use the correct units.

Find the width of a rectangle when the area = 105 square km and the length is 15 km.

12. The perimeter of a square is 28 km. What is the length of each side?

13. Find the width of a rectangle when the area = 108 square yards and the length is 12 yards.

Learning is a process.

