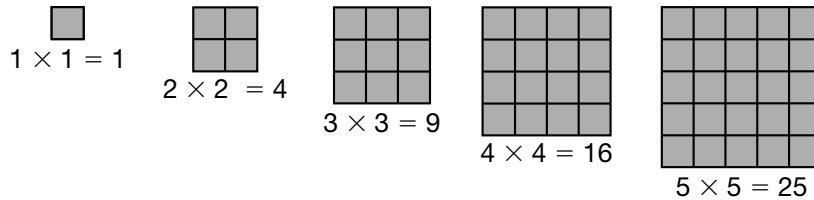


- **Squares**
- **Multiplication Facts: Square Numbers**

- A **square number** is the product of two identical factors.
- A square number and its factors can be modeled as a square array.

**Practice:**

- Write the next three numbers in this sequence of square numbers. You may use the multiplication table.

9, 16, 25, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, ...

Complete each multiplication fact below.

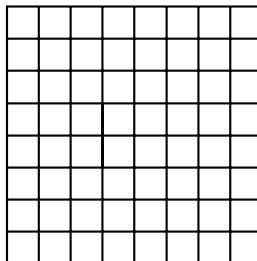
2.  $1 \times 1 =$  \_\_\_\_\_      3.  $11 \times 11 =$  \_\_\_\_\_      4.  $5 \times 5 =$  \_\_\_\_\_

5.  $12 \times 12 =$  \_\_\_\_\_      6.  $2 \times 2 =$  \_\_\_\_\_      7.  $6 \times 6 =$  \_\_\_\_\_

8.  $9 \times 9 =$  \_\_\_\_\_      9.  $4 \times 4 =$  \_\_\_\_\_      10.  $8 \times 8 =$  \_\_\_\_\_

11.  $10 \times 10 =$  \_\_\_\_\_      12.  $7 \times 7 =$  \_\_\_\_\_      13.  $3 \times 3 =$  \_\_\_\_\_

- This square pattern is made with 8 rows of 8 tiles. How many tiles are in this square?



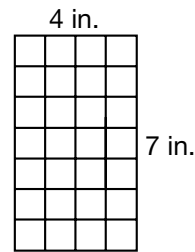
\_\_\_\_\_ tiles

• **Area, Part 1**

- The **area** of a rectangle is the amount of surface inside it.
- To measure area, we count the number of squares that fit inside the rectangle.
- We describe the area of a figure using square units.

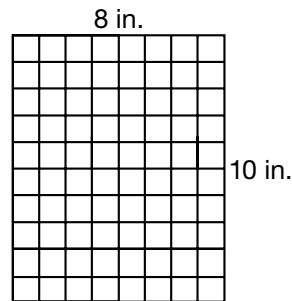
**Practice:**

1. Jennifer made a card for her friend. The card is 4 inches wide and 7 inches long. What is the area of Jennifer’s card?



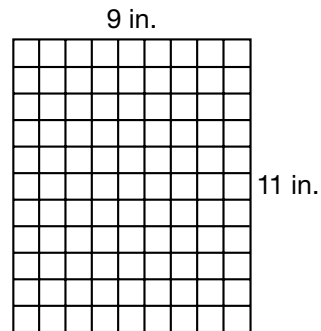
\_\_\_\_\_ square inches

2. Priscilla is cutting an 8-inch by 10-inch sheet of paper into 1-inch squares. What is the area of Priscilla’s paper?



\_\_\_\_\_ square inches

3. Frank made a parking lot for his toy cars from a piece of cardboard. The piece of cardboard was 9 inches wide and 11 inches long. What is the area of Frank’s parking lot?

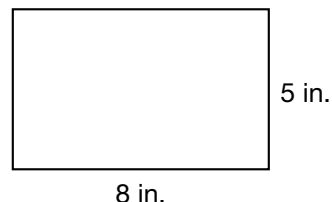


\_\_\_\_\_ square inches

4. What are the perimeter and area of a 5-inch by 8-inch rectangle?

perimeter: \_\_\_\_\_ inches

area: \_\_\_\_\_ square inches



• **Area, Part 2**

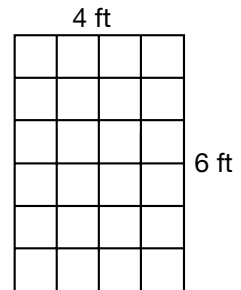
- Area may be measured in square inches, square feet, or square yards.
- A rectangle's area is equal to its length times its width:

$$\text{Area} = \text{length} \times \text{width}$$

**Practice:**

1. Walter's closet floor is covered with one-foot square tiles. The closet is 4 feet by 6 feet.

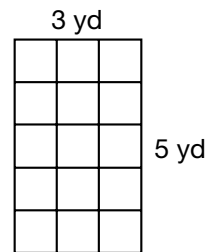
How many tiles cover the closet floor? \_\_\_\_\_



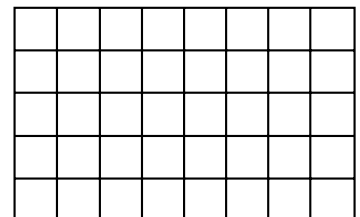
2. How many square yards of carpet are needed to cover the floor of a room that is 7 yards wide and 6 yards long? \_\_\_\_\_

You may wish to use color tiles to model the problem.

3. A rectangular area is 3 yards long and 5 yards wide. How many square yards of carpet are needed to cover this area? \_\_\_\_\_



4. Adrian's patio is 8 feet long and 5 feet wide. What is the area of the patio? \_\_\_\_\_



**• Multiplication Facts: 9s**

- We can skip count by 9s to find products with 9 as a factor.
  - We can use a multiplication table to find products.
- 

**Practice:**

Find each product in problems 1–9.

1.  $3 \times 9$  \_\_\_\_\_

2.  $9 \times 9$  \_\_\_\_\_

3.  $10 \times 9$  \_\_\_\_\_

4.  $8 \times 9$  \_\_\_\_\_

5.  $9 \times 6$  \_\_\_\_\_

6.  $9 \times 2$  \_\_\_\_\_

7.  $9 \times 5$  \_\_\_\_\_

8.  $7 \times 9$  \_\_\_\_\_

9.  $4 \times 9$  \_\_\_\_\_

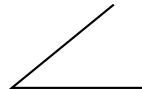
10. One square yard is 9 square feet. How many square feet are in 5 square yards? \_\_\_\_\_
11. There are 9 players on each baseball team. How many players are on 4 baseball teams? \_\_\_\_\_
12. A rectangle is 4 inches long and 9 inches wide. What is the area of the rectangle? \_\_\_\_\_

• **Angles**

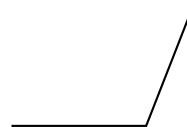
- An **angle** is an open figure with two sides that meet at a **vertex**.
- We can describe angles as **right, acute,** or **obtuse**.



right angle



acute angle



obtuse angle

**Practice:**

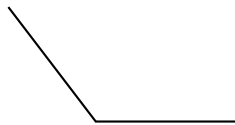
1. What kind of angle is larger than a right angle? \_\_\_\_\_
2. What kind of angle is smaller than a right angle? \_\_\_\_\_
3. What kind of angles are in a rectangle? \_\_\_\_\_
4. Identify the angles below as acute, right or obtuse.

a.



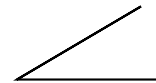
\_\_\_\_\_

b.



\_\_\_\_\_

c.



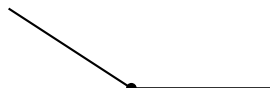
\_\_\_\_\_

5. The angles below are marked with a dot at the point where the two sides meet.
  - a. What is the name of the point where the sides of an angle meet? \_\_\_\_\_

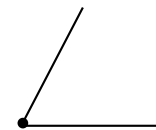
- b. Identify each angle below as acute, right, or obtuse.



\_\_\_\_\_



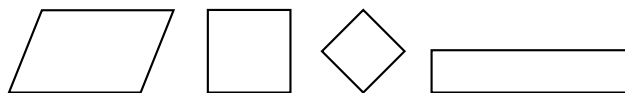
\_\_\_\_\_



\_\_\_\_\_

• **Parallelograms**

- A **parallelogram** is a four-sided flat shape.

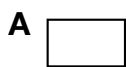


**Parallelograms**

- Parallelograms have two pairs of parallel sides.

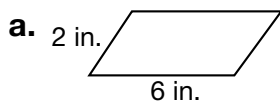
**Practice:**

1. Which of these figures is **not** a parallelogram? \_\_\_\_\_

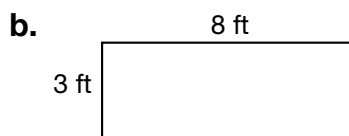


2. Which shapes in problem 1 are rectangles? \_\_\_\_\_

3. Find the perimeter of each parallelogram.

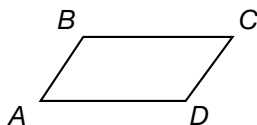


\_\_\_\_\_



\_\_\_\_\_

4. Use the parallelogram below to answer questions **a-c**.








- a.** Which two angles are obtuse? \_\_\_\_\_

- b.** Which two angles are acute? \_\_\_\_\_

- c.** Which side of the parallelogram is parallel to side *BC*? \_\_\_\_\_

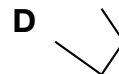
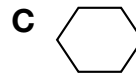
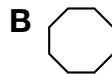
**• Polygons**

- A **polygon** is a closed, flat shape with straight sides.
- Polygons are named by the number of sides.

Polygons		
Name	Example	Number of Sides
Triangle		3
Quadrilateral		4
Pentagon		5
Hexagon		6
Octagon		8

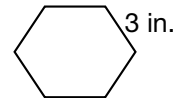
**Practice:**

1. Which figure is not a polygon? \_\_\_\_\_



2. Which figure in problem 1 is a quadrilateral? \_\_\_\_\_

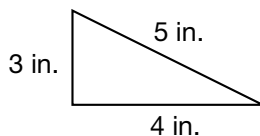
3. Each side of this shape is 3 in. long.  
What is its perimeter?



\_\_\_\_\_

4. What type of polygon is the shape in problem 3? \_\_\_\_\_

5. What is the perimeter of this polygon?



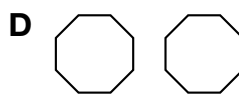
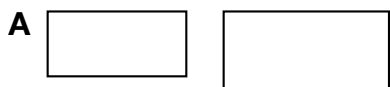
6. What type of polygon is the shape in problem 5? \_\_\_\_\_

• **Congruent Shapes**

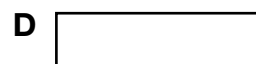
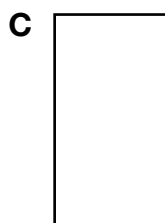
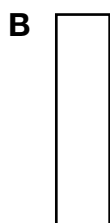
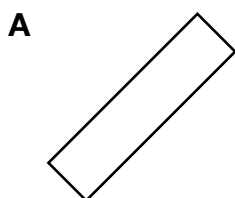
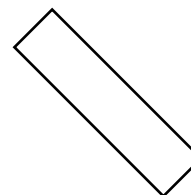
- Two figures are **congruent** if they are the same size and the same shape.
- If congruent figures are turned or flipped, they are still congruent.

**Practice:**

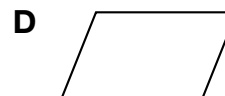
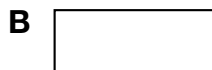
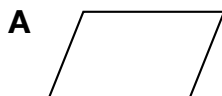
1. Which pair of figures below is **not** congruent? \_\_\_\_\_



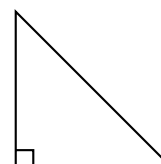
2. Which rectangle below is **not** congruent to the rectangle at right? \_\_\_\_\_



3. Which two figures below are congruent? \_\_\_\_\_



4. Draw a triangle that is congruent to the triangle at right.


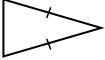
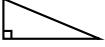
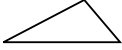




## • Triangles

- A **triangle** is a three-sided polygon.
- The table below shows some special kinds of triangles.

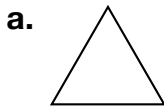
**Types of Triangles**

Name	Example	Characteristic
Equilateral		three equal sides
Isosceles		two equal sides
Right		one right angle
Scalene		all sides different lengths

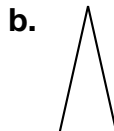
### **Practice:**

Use the table shown above to answer problems 1–4.

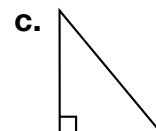
1. What type of triangle has two equal sides? \_\_\_\_\_
2. What type of triangle has three sides of different lengths? \_\_\_\_\_
3. What type of triangle has one right angle? \_\_\_\_\_
4. What type of triangle has three equal sides? \_\_\_\_\_
5. Name each type of triangle shown below.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

**• Multiplication Facts: Memory Group**

- We can use a multiplication table to find products.
  - We can learn multiplication facts by practicing them with a multiplication table or with flash cards.
- 

**Practice:**

Find each product.

1.  $6 \times 8$  \_\_\_\_\_

2.  $7 \times 8$  \_\_\_\_\_

3.  $4 \times 6$  \_\_\_\_\_

4.  $7 \times 3$  \_\_\_\_\_

5.  $3 \times 7$  \_\_\_\_\_

6.  $6 \times 4$  \_\_\_\_\_

7.  $8 \times 7$  \_\_\_\_\_

8.  $8 \times 6$  \_\_\_\_\_

9.  $7 \times 4$  \_\_\_\_\_

10.  $3 \times 4$  \_\_\_\_\_

11.  $7 \times 6$  \_\_\_\_\_

12.  $4 \times 8$  \_\_\_\_\_

13.  $6 \times 3$  \_\_\_\_\_

14.  $3 \times 7$  \_\_\_\_\_

15.  $6 \times 7$  \_\_\_\_\_

16. A rectangle is 8 inches long and 7 inches wide. What is its area? \_\_\_\_\_

17. Gerald arranged color tiles in an array with 4 rows and 6 columns. How many color tiles are in his array? \_\_\_\_\_