Geometry Routine

Purpose

Use this routine to help students identify what formulas are needed in a geometry problem and for what information the question is asking.

Time

Five to ten minutes per geometry problem (does not include calculation time)

Supported Standards

MP 1: Make sense of problems and persevere in solving them.

Materials

- One blank Geometry Quadrant Chart for each student
- Set of geometry problems you are working on (geometry problems containing one formula is ideal)

Procedure

The first time this routine is done, the teacher and student(s) should do it together. Read through the geometry problem and identify the shape, type of problem (perimeter, circumference, area, volume, or surface area), formula(s) needed as well as the given and needed information. This routine is meant to help students identify this information before any calculations happen.

1. Read the geometry problem, identify, and write the shape in the middle of the chart.

2. In the upper left quadrant, have students draw the shape.

3. Have students decide what type of problem this is (perimeter, circumference, area, volume, or surface area) and write it in the upper right quadrant.

4. Have students identify what formula is needed to complete the problem and write it in the bottom left quadrant. Students may use the math formula sheet.

5. In the bottom right quadrant, have students identify what measurements are given in the problem and what measurements they need to calculate to solve the problem. Ask students how they identified this information. If they are unsure, point out key words such as square
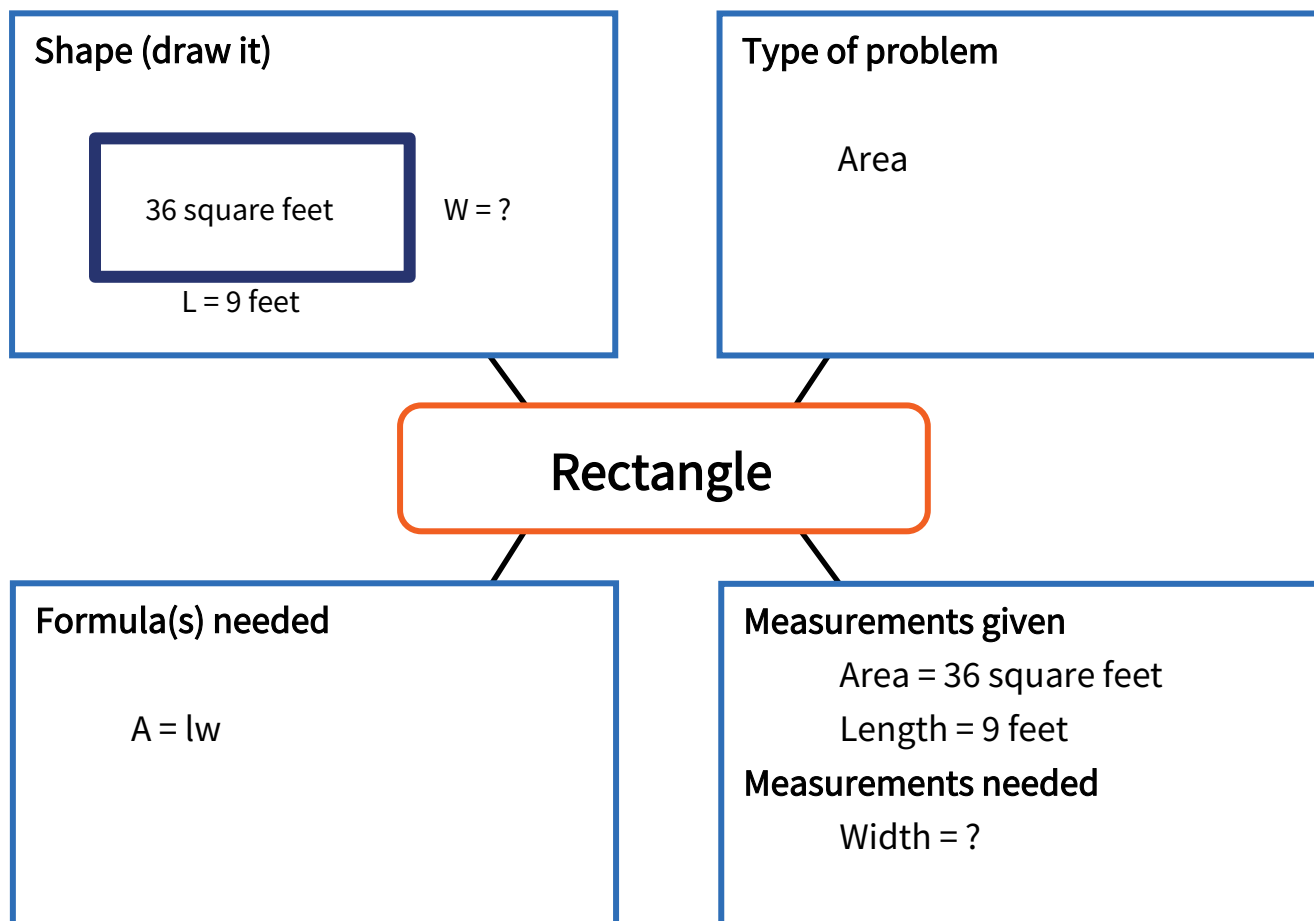
units, cubed units or regular units, length, width, halfway across (indicating radius in a circle), all the way across (indicating the diameter in a circle).

6. Students are now ready to work on calculating the answer to the problem.

Example

Below is an example of a geometry problem involving a rectangle that gave the area and asked for the width.

Maria has a flowerbed that has 36 square feet of garden space. If the flowerbed is nine feet long, how wide is it?

Shape (draw it)	Type of problem
36 square feet W = ? L = 9 feet	Area

<center>Rectangle</center>

Formula(s) needed	Measurements given
A = lw	Area = 36 square feet Length = 9 feet **Measurements needed** Width = ?

This graphic organizer is adapted from the Frayer Model.