MEASUREMENT, PERIMETER, AND CIRCUMFERENCE

Measurement refers to the way objects are measured. There are two systems used to measure objects, the U.S. **Customary system** and the metric system. The U.S. Customary system measures length in inches, feet, yards and miles. The **metric system** is a base ten system and measures length in kilometers, meters, centimeters and millimeters.

Accuracy and precision refer to using the correct label for a given object or situation. When measuring, accuracy and precision are very important.

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How ~~...~~ ce
Whe~~...~~ tem is u~~...~~ om one unit to another. With the U. S. Customary system, in order to convert units of length, the following conversions must be used.

U.S. Customary system	Metric system
12 inches = 1 foot	10 millimeters = 1 centimeter
3 feet = 1 yard	100 centimeters = 1 meter
5280 feet = 1 mile	1000 meters = 1 kilometer
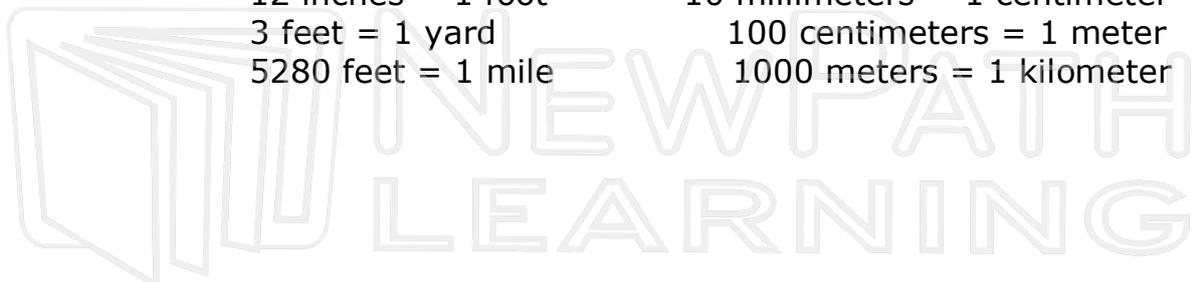
To measure **liquids**, the U.S. Customary system uses cups, pints, quarts, and gallons. The metric system uses kiloliters, liters, and milliliter.

U.S. Customary system	Metric system
1 cup = 8 fl. ounces	1000 milliliters = 1 liter
2 cups = 1 pint	1000 liters = 1 kiloliter
2 pints = 1 quart	
4 quarts = 1 gallon	

For example, to change 6 cups to quarts, the 6 cups must first be changed into pints by using the equation, 2 cups/1 pint = 6 cups/x pints to get 3 pints. The 3 pints can now be changed into quarts using the following equation, 2 pints/1 quart = 3 pints/x quarts to get 1.5 quarts. So 6 cups is equal to 1.5 quarts.

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To c_____
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Per_____
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add_____
account all sides. If a figure is shown the sides can just simply be added together. Perimeter can be found for any figure, whether it is a square, triangle, hexagon, pentagon, or octagon.   If the perimeter is given, the missing side can also be found.

The **circumference** is the distance around the circle. If the diameter of the circle is known, the circumference can also be found using the formula C = π · d.   If the radius is given, the diameter can be found by doubling the radius and then the circumference formula can be used. If the circumference is given, the diameter can be found using the same formula.

Try This!

1. Convert the following:

   12 feet to inches   _____

   120 meters to millimeters _____

   5 cups to ounces   _____

   1 gallon to cups

2. H

3. What is the **perimeter** of the following shapes:
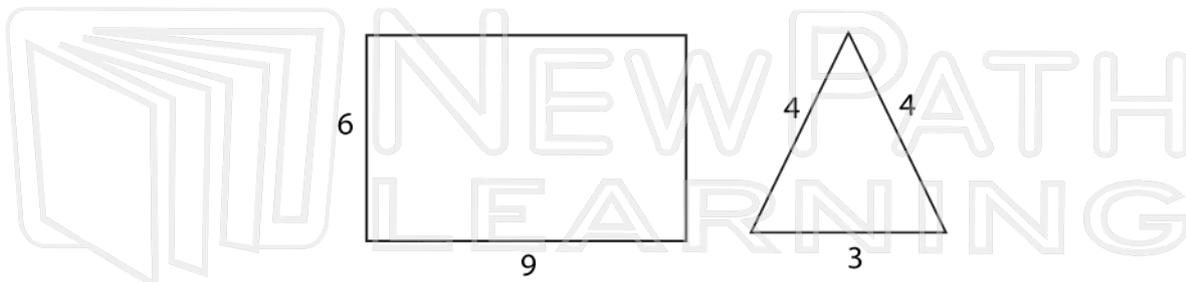
4. What is the missing side of the following shapes?

P = 48 units   P = 22 units
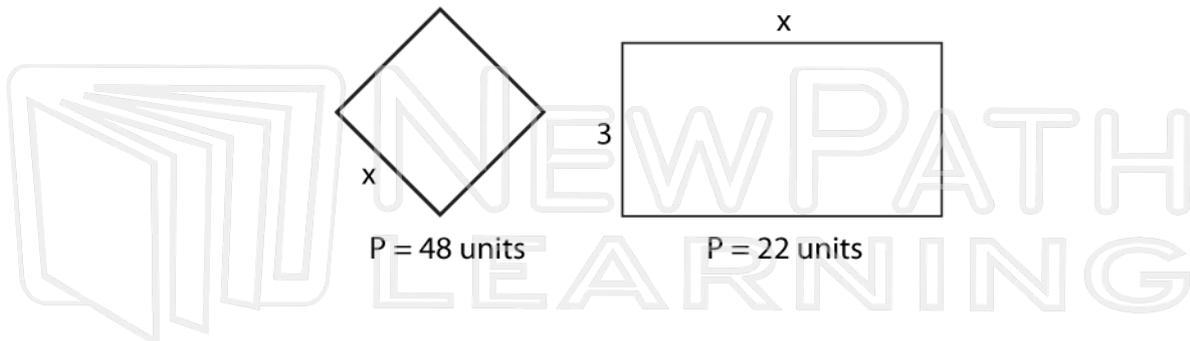
5. What is the **circumference** if C = п · d and п = 3.14?

6. W

    C = 18.84 units