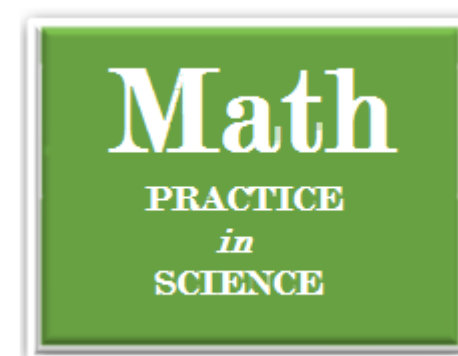


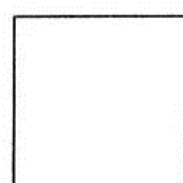
085 Math Practice

Area with Metrics



Area (or the space enclosed within lines) can also be measured using the metric system. Area is measured in square units. These include square millimeters (mm^2), square centimeters (cm^2), and square meters (m^2). This is what two of those measures actually look like.

▫ 1 mm^2



1 cm^2

To find the area, use the formula you already know.

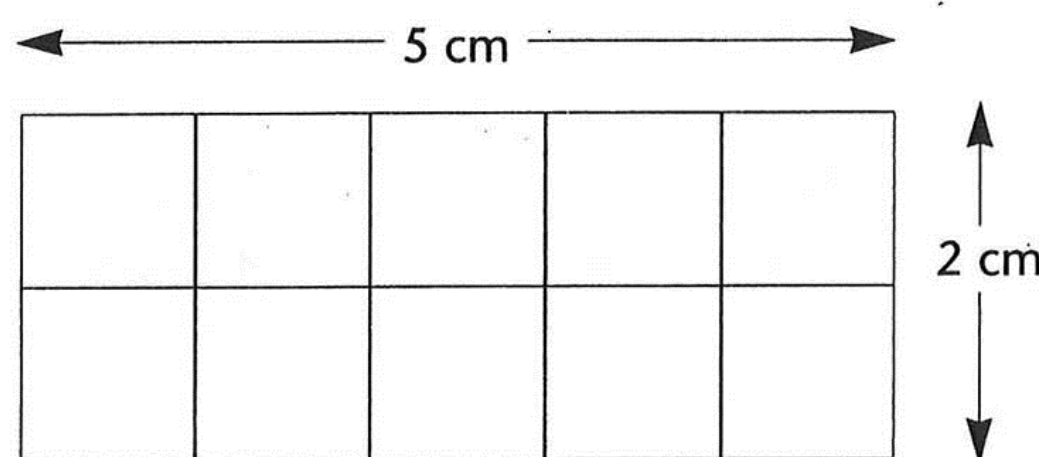
$$\text{AREA} = \text{LENGTH} \times \text{WIDTH}$$

Example:

$$\text{AREA} = \text{LENGTH} \times \text{WIDTH}$$

$$A = 5 \text{ cm} \times 2 \text{ cm}$$

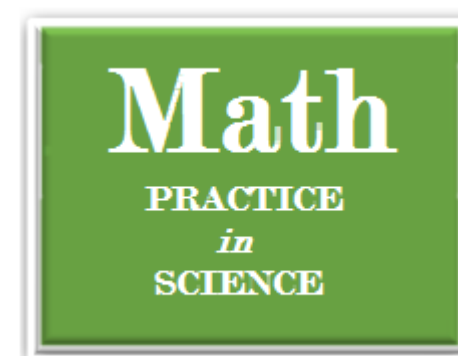
$$A = 10 \text{ cm}^2$$



Find the area of each rectangle. Name each unit correctly.

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

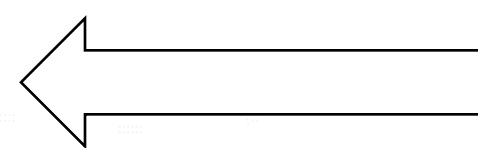
086 Math Practice



Converting Units of Capacity

Capacity means the amount of liquid a container can hold. When you change from a large unit of capacity to a smaller unit, you multiply by the conversion factor. When changing from a small unit of capacity to a larger unit, you would divide by the conversion factor. This table shows the conversion factors for unit of liquid capacity.

Unit of capacity	Conversion factor
1 pint (pt.)	= 16 ounces (oz.)
1 pint (pt.)	= 2 cups (c.)
1 quart (qt.)	= 2 pints (pt.)
1 gallon (gal.)	= 4 quarts (qt.)



This is the English (or, Imperial system). In science you will use the metric system measured in liters. The concepts of conversion are the same as these examples, however.

Examples:

$$5 \text{ quarts} = \underline{\hspace{2cm}} \text{ pints}$$

Large to Small — **Multiply**
by the conversion factor

$$1 \text{ quart} = 2 \text{ pints}$$

$$5 \times 2 = 10$$

$$5 \text{ quarts} = 10 \text{ pints}$$

$$12 \text{ quarts} = \underline{\hspace{2cm}} \text{ gallons}$$

Small to Large — **Divide**
by the conversion factor

$$1 \text{ gallon} = 4 \text{ quarts}$$

$$12 \div 4 = 3$$

$$12 \text{ quarts} = 3 \text{ gallons}$$

Fill in the blanks.

1. 6 pt. = _____ oz.

2. 12 qt. = _____ pt.

3. 8 pt. = _____ qt.

4. 20 pt. = _____ c.

5. 96 oz. = _____ pt.

6. 10 gal. = _____ oz.

7. 216 oz. = _____ pt.

8. 14 qt. = _____ c.

9. 1 qt. 1 pt. = _____ pt.

10. 18 pt. = _____ gal.

11. $5\frac{1}{2}$ gal. = _____ qt.

12. 2 pt. 3 oz. = _____ oz.

13. 3 c. = _____ oz.

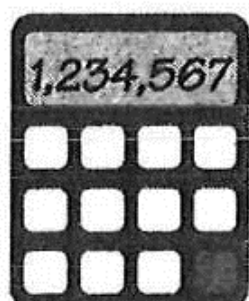
14. 33 pt. = _____ qt.

15. 4 gal. 2 qt. = _____ qt.

16. 23 gal. = _____ qt.

17. 25 qt. = _____ pt.

18. 10 pt. = _____ oz.



Jackie filled her fish tank with 13 quarts of water. Two months later the fish tank contained 3 gallons of water. How many cups of water had evaporated?
