

Conversions WS

Converter: \_\_\_\_\_

#1-3, Find the *unit rate*:

1. A long distance runner ran 9000 meters in 30 minutes.

$$\frac{9000 \text{ m}}{30 \text{ min}} = \frac{x}{1 \text{ min}} \quad 300 \text{ meters/min}$$

2. A hummingbird flaps its wings 770 times in 14 seconds.

$$\frac{770 \text{ times}}{14 \text{ sec}} = \frac{x}{1 \text{ sec}} \quad 55 \text{ flap/sec}$$

3. Miss Gill drives 330 miles on 13 gallons of gas.

$$\frac{330 \text{ mi}}{13 \text{ gal}} = \frac{?}{1 \text{ gal}} \quad 25.38 \text{ miles/gal.}$$

#4-6, Using your answers from #1-3, find the specified rate: (A little converting required)

4. #2 in flaps/minute

5. #3 in yrds/gal

6. #1 in km/sec

$$\frac{55 \text{ flaps}}{1 \text{ sec}} \left( \frac{60 \text{ sec}}{1 \text{ min}} \right) = 3300$$

$$\frac{25.38 \text{ miles}}{1 \text{ gal}} \left( \frac{1760 \text{ yd}}{1 \text{ mile}} \right)$$

$$\frac{300 \text{ meters}}{1 \text{ min}} \left( \frac{1 \text{ min}}{60 \text{ sec}} \right) \left( \frac{1 \text{ km}}{1000 \text{ m}} \right) =$$

$$4466.8 \quad ,005$$

7. A 64 oz. carton of OJ costs \$3.29 at Safeway. A 12 oz. bottle of OJ I picked out of the cooler by the register costs \$1.50. Find the unit rate in *cost per ounce* for each.

a. 64 oz. = .05      12 oz = .13

b. Which is the better deal? 64oz

c. Why does this make sense for store?

#8-11, Use the table at right to complete the conversions.

8. 10 liters = 2.63 gallons.

9. 46 teaspoons = 2.48 pints

10. 159.16 ounces = 9.45 liters.

Liquid Volume Measures	
3 tsp	1 TB
16 TB	1/2 pint
1 pint	8 ounces
2 pint	1 quart
4 quart	1 gallon
1 gallon	3.8 liters

11. A soft-serve ice cream machine makes 1200 gallons per hour. Convert this to cups per minute (1 gal. = 16 cups)

$$320 \text{ cups/min}$$

$$\frac{1200 \text{ gal}}{1 \text{ hr}} \left( \frac{1 \text{ hr}}{60 \text{ min}} \right) \left( \frac{16 \text{ cups}}{1 \text{ gal}} \right)$$

12. 13 weeks = 2,184 hours

13. 50 miles per hour = 73.33 feet per second

$$\left( \frac{50 \text{ miles}}{1 \text{ hour}} \right) \left( \frac{5280 \text{ ft}}{1 \text{ mile}} \right) \left( \frac{1 \text{ hr}}{60 \text{ min}} \right) \left( \frac{1 \text{ min}}{60 \text{ sec}} \right)$$