

Unit Conversion and Unit Rate Notes

Name _____

Class Period _____

Set up and solve the following.

1. 8 quarts to gallons

$$\frac{8 \text{ qt}}{1} \times \frac{1 \text{ gal}}{4 \text{ qt}} = \frac{8}{4} = \boxed{2 \text{ gal}}$$

2. 16 weeks to seconds

$$\frac{16 \text{ weeks}}{1} \times \frac{7 \text{ days}}{1 \text{ week}} \times \frac{24 \text{ hrs}}{1 \text{ day}} \times \frac{60 \text{ mins}}{1 \text{ hr}} \times \frac{60 \text{ sec}}{1 \text{ min}} = \boxed{9,676,800 \text{ sec}}$$

3. 5,400 inches to miles

$$\frac{5,400 \text{ in}}{1} \times \frac{1 \text{ ft}}{12 \text{ in}} \times \frac{1 \text{ miles}}{5,280 \text{ ft}} = \frac{5,400}{63,360} = \boxed{0.09 \text{ miles}}$$

4. 2 Tons to Ounces

$$\frac{2 \text{ T}}{1} \times \frac{2,000 \text{ lb}}{1 \text{ T}} \times \frac{16 \text{ oz}}{1 \text{ lb}} = \boxed{64,000 \text{ oz}}$$

5. 4 pints to fl ounces

$$\frac{4 \text{ pt}}{1} \times \frac{2 \text{ c}}{1 \text{ pt}} \times \frac{8 \text{ floz}}{1 \text{ c}} = \boxed{64 \text{ floz}}$$

6. 4000 Liters to mL

$$4000 \text{ L} \times \frac{1,000 \text{ mL}}{1 \text{ L}} = \boxed{4,000,000 \text{ mL}}$$

7. 250 mg to grams

$$\frac{250 \text{ mg}}{1 \text{ g}} \times \frac{1 \text{ g}}{1,000 \text{ mg}} = \boxed{.25 \text{ grams}}$$

8. 8050 cm to km

$$\frac{8050 \text{ cm}}{1 \text{ km}} \times \frac{1 \text{ km}}{100,000 \text{ cm}} = \boxed{.0805 \text{ km}}$$

9. If 160 words typed in 4 minutes, how many words are typed in 1 minute?



$$\frac{160 \text{ words}}{4 \text{ minutes}} = 40 \text{ words/min}$$

10. If a car drove 180 km in 3 hours, how many kilometers did the car drive in 1 hour?

$$\frac{180 \text{ km}}{3 \text{ hrs}} = 60 \text{ km/hr}$$

11. A student worked five days per week and eight hours per day. He earned \$300 per week. What was his hourly rate of pay?

12. Which is a better buy, 500 sheets of paper for \$9.45 or 4,500 sheets of paper for \$49?

- ① Draw your "t chart" 
- ② Write down the given information in the top left of chart
- ③ Put it over 1 
- ④ Find the conversion factor
- ⑤ Match the units up diagonally so that your units will cancel.
- ⑥ Fill in the conversion factor
- ⑦ Multiply across top & bottom & divide.