

Dimensional Analysis Practice Worksheet

Name Key Class Period _____

Convert each number to its indicated unit.

1. 50 c = 12.5 qt

$$\frac{50 \text{ cups}}{1} \cdot \frac{1 \text{ qt}}{2 \text{ cups}} \cdot \frac{1 \text{ qt}}{2 \text{ pints}}$$

2. 190 mm = 1.9 dm

$$\frac{190}{100}$$

3. 32 gal = 4096 fl oz

$$\frac{32 \text{ gal}}{1} \cdot \frac{4 \text{ qt}}{1 \text{ gal}} \cdot \frac{2 \text{ pt}}{1 \text{ qt}} \cdot \frac{2 \text{ c}}{1 \text{ pt}} \cdot \frac{8 \text{ oz}}{1 \text{ cup}}$$

4. 1.42 kg = 14.2 hg

$$\frac{1.42}{0.1}$$

5. 40 oz = 2.5 lb

$$\frac{40 \text{ oz}}{1} \cdot \frac{1 \text{ lb}}{16 \text{ oz}}$$

6. 700 in = $\frac{175}{9}$ yd or 19.4 yd.

$$\frac{700 \text{ in}}{1} \cdot \frac{1 \text{ ft}}{12 \text{ in}} \cdot \frac{1 \text{ yd}}{3 \text{ ft}}$$

7. 1,400 L = 140000 cL

$$1400 \cdot 100$$

8. 52 pt = 26 qt

$$\frac{52 \text{ pt}}{1} \cdot \frac{1 \text{ qt}}{2 \text{ pt}}$$

Complete each statement with <, >, or =.

9. 13.5 hg $\textcircled{>}$ 1.2 kg
 12 hg

10. 2,400 lb $\textcircled{=}$ 1.2 T

$$\frac{1.2 \cancel{T} \cdot 2000 \text{ lb}}{1 \cancel{T}}$$

$$2400 \text{ lb.}$$

Find the Unit Rate with the appropriate units.

11. \$284 for a four day car rental

$$\frac{284}{4} = \$71 \text{ per day}$$

12. Jogging 3.5 miles in 30 minutes

$$\frac{3.5}{30} = 0.11\bar{6} \text{ miles per minute}$$

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13. You are throwing a pizza party for 15 people and figure that each person will eat four slices. You call the pizza place and learn that each pizza will cost you \$14.78 and will be cut into 12 slices. How much is the pizza going to cost you?

$$15 \times 4 = 60 \text{ slices}$$

$$\frac{60}{12} = 5 \text{ pizzas}$$

$$5 \times \$14.78$$

$$= \boxed{\$73.90}$$

14. Decide which is a better buy: \$25.00 for concert tickets for two people or \$36 for concert tickets for three people

$$\frac{\$25}{2} = \$12.50 \text{ per person}$$

$$\frac{\$36}{3} = \$12 \text{ per person}$$

\$36 for 3 is a better buy

Circle the best answer for each multiple choice question below.

15. Which of the following weights would be the most accurate weight for a medium-sized dog?

A. $\frac{1}{20}$ T

B. 640 oz

C. 120 oz

D. $\frac{1}{10}$ T

100 lbs.

40 lbs.

7.5 lbs.

200 lbs.

16. The Mayo Clinic recommends that the average female should drink 2.2L of water per day and the average male should drink 3L of water per day. A water bottle measures in mL only. Which of the amounts below shows the correct amount of mL a male should be drinking with this water bottle?

A. 0.003 mL

B. 3000 mL

C. 0.0022 mL

D. 2200 mL

3L
