

PS Chemistry
Metric Practice

Name _____

Period _____

Write the correct abbreviation for each metric unit.

1) Kilogram _____

4) Milliliter _____

7) Kilometer _____

2) Meter _____

5) Millimeter _____

8) Centimeter _____

3) Gram _____

6) Liter _____

9) Milligram _____

Try these conversions, using the ladder method.

1) 2000 mg = _____ g

6) 5 L = _____ mL

11) 16 cm = _____ mm

2) 104 km = _____ m

7) 198 g = _____ kg

12) 2500 m = _____ km

3) 480 cm = _____ m

8) 75 mL = _____ L

13) 65 g = _____ mg

4) 5.6 kg = _____ g

9) 50 cm = _____ m

14) 6.3 cm = _____ mm

5) 8 mm = _____ cm

10) 5.6 m = _____ cm

15) 120 mg = _____ g

Compare using <, >, or =.

16) 63 cm ○ 6 m

17) 5 g ○ 508 mg

18) 1,500 mL ○ 1.5 L

19) 536 cm ○ 53.6 dm

20) 43 mg ○ 5 g

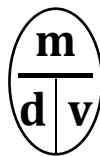
21) 3.6 m ○ 36 cm

Calculate Density.

Density is a derived unit because it is a combination of two other variables, mass and volume. When calculating density, mass or volume please show your work, round to the hundredths and label to receive full credit.

$$\text{density} = \frac{\text{mass}}{\text{volume}}$$

$$d = \frac{m}{v}$$



- 1) A block of wood has a volume of 15 mL and a mass of 171 g. What is the density of the block of wood?
- 2) A rock is dropped into a graduated cylinder filled with water. The volume is measured to be 40 mL. The rock is then placed on a triple beam balance and the mass is measured to be 148 g. What is the density of the rock?
- 3) A block of wood has a density of 0.6 g/mL and a volume of 1.2 mL. What is the mass of the block of wood?
- 4) A 800 g rock has a density of 8 g/mL. What is the volume of the rock?
- 5) A student finds a rock on the way to school. In the laboratory he determines the volume of the rock. He fills a graduated cylinder with 100 mL of water. When he drops the rock into the graduated cylinder the water rises to 125.5 mL. What is the volume of the rock?
- 6) He then places the rock (question #5) on a triple beam balance and measures the mass of the rock. He records the mass as 427.3 g. What is the density of the rock?
- 7) The volume of a strangely shaped object is 22.7 mL and the mass is 39.9 g. What is the density of the object?