

Name \_\_\_\_\_

### Factor Label (Dimensional Analysis) Conversions

1. If a British penny (pence) is worth \$0.065 in US money, what is the US value of 244 pence?
2. What is the volume in liters of a box with the dimensions of 72.0 cm by 30.0 cm by 24.0 cm?
3. What is the volume in liters of a box with the dimensions of 82.4 mm by 35.2 mm by 1.32 cm?
4. Find the volume of 69.3 g of gold. The density of gold is 19.3 g/cm<sup>3</sup>.
5. What is the mass of a 0.85 carat diamond if 1 carat = 0.200 grams. (100 points = 1 carat)
6. Find the mass of 50.0 ml of CCl<sub>4</sub> if the density is 1.60 g/ml.
7. Find the volume of 225.0 g of ethyl alcohol if the density is 0.791 g/ml.
8. Find the mass of a piece of balsa wood with the dimensions of 12.0 cm by 6.0 cm by 3.00 cm if the density of balsa wood is 0.125 g/cm<sup>3</sup>.
9. Find the density of mercury if 1.00 x 10<sup>2</sup> g has a volume of 7.36 ml.
10. What is the density of mercury in kg/m<sup>3</sup>?
11. 0.786 m = \_\_\_\_\_ mm
12. 4.84 x 10<sup>2</sup> cm = \_\_\_\_\_ km
13. 7.26 x 10<sup>-3</sup> L = \_\_\_\_\_ cm<sup>3</sup>
14. 10.40 kg = \_\_\_\_\_ mg
15. 453 ml = \_\_\_\_\_ L
16. 3.267 nm = \_\_\_\_\_ m
17. 101.3 kPa = \_\_\_\_\_ Pa
18. 2.35 kg of aluminum = \_\_\_\_\_ cm<sup>3</sup>
19. 785 cg = \_\_\_\_\_ kg
20. 6.34 x 10<sup>-5</sup> kL = \_\_\_\_\_ mL