

Honors Chem WKS
Significant Figures in Calculations

NAME _____
Period _____ Date _____

A. Rounding

Round each of the following to 3 significant figures.

- 1) 98.473 m
- 3) 0.00076321 mm
- 5) 57.048 g
- 7) 12.15 g
- 9) 7.49830×10^{-4} mm
- 11) 874.5 °C

Round each of the following to 4 significant figures.

- 2) 4.59812 mm
- 4) 0.0094249 g
- 6) 20.498 kg
- 8) 6.82035×10^3 L
- 10) 45,698 km (be careful!)
- 12) 0.31995 mg

B. Calculations

Give the results of the following problems to the correct number of significant figures. Watch your units! Units can be multiplied or divided, but in addition and subtraction all units and exponents must be the same and the answer is in the same units.

- 13) $12.8 \text{ m} \times 5.2 \text{ m} =$
- 14) $100 \text{ pencils} \times 8.57 \text{ g/pencil} =$
- 15) $0.00005 \text{ cm} \times 538 \text{ cm}^2 =$
- 16) $6008 \text{ cm}^3 \div 8.724 \text{ cm} =$
- 17) $72 \text{ cm} \div 7 \text{ rods} =$
- 18) $600 \text{ g} \div 38 \text{ mL} =$
- 19) $357.89 \text{ g} + 0.002 \text{ g} =$
- 20) $17.95 \text{ m} + 32.42 \text{ m} + 50 \text{ m} =$
- 21) $5.5 \text{ mL} + 3.7 \text{ mL} + 2.97 \text{ mL} =$
- 22) $84.675 \text{ cm} - 3 \text{ cm} =$
- 23) $75 \text{ }^\circ\text{C} - 2.55 \text{ }^\circ\text{C} =$
- 24) $10 \text{ g} - 9.9 \text{ g} =$

Answers: 13) 67 m^2 ; 14) 857 g; 15) 0.03 cm^3 ; 16) 688.7 cm^2 ; 17) 10. cm/rod; 18) 20 g/mL; 19) 357.89 g; 20) $1.0 \times 10^2 \text{ m}$; 21) 12.2 mL; 22) 82 cm; 23) 72 °C; 24) 0 g