

Name: _____

Period: _____

Seat#: _____

Give the number of significant figures in each of the following:

1) 402 m	2) 34.20 lbs	3) 0.03 sec	4) 0.00420 g
5) 3200 liters	6) 0.0300 ft.	7) 5.1×10^4 kg	8) 0.48 m
9) 1400.0 m	10) 78323.01 g	11) 1.10 torr	12) 760 mm Hg

Multiply each of the following, observing significant figure rules:

13) $17 \text{ m} \times 324 \text{ m} =$	14) $1.7 \text{ mm} \times 4294 \text{ mm} =$
15) $0.005 \text{ in} \times 8888 \text{ in} =$	16) $0.050 \text{ m} \times 102 \text{ m} =$
17) $0.424 \text{ in} \times .090 \text{ in} =$	18) $324000 \text{ cm} \times 12.00 \text{ cm} =$

Divide each of the following, observing significant figure rules:

19) $23.4 \text{ m} \div 0.50 \text{ sec} =$	20) $12 \text{ miles} \div 3.20 \text{ hours} =$
21) $0.960 \text{ g} \div 1.51 \text{ moles} =$	22) $1200 \text{ m} \div 12.12 \text{ sec} =$

Add or subtract each of the following, observing significant figure rules:

23) $3.40 \text{ m} + 0.022 \text{ m} + 0.5 \text{ m}$	24) $102.45 \text{ g} + 2.44 \text{ g} + 1.9999 \text{ g}$	25) $102. \text{ cm} + 3.14 \text{ cm} + 5.9 \text{ cm}$
26) $42.306 \text{ m} - 1.22 \text{ m}$	27) $14.33 \text{ g} - 3.468 \text{ g}$	28) $234.1 \text{ cm} - 62.04 \text{ cm}$

Dougherty Valley HS Chemistry
Significant Figures Practice 1

Work each of the following problems, observing significant figure rules:

- 29)** Three determinations were made of the percentage of oxygen in mercuric oxide. The results were 7.40%, 7.43%, and 7.35%. What was the average percentage?
- 30)** A rectangular solid measures 13.4 cm x 11.0 cm x 2.2 cm. Calculate the volume of the solid.
- 31)** If the density of mercury is 13.6 g/ml, what is the mass in grams of 3426 ml of the liquid?
- 32)** A copper cylinder is 12.0 cm in radius and has a height of 44.0 cm. If the density of copper is 8.90 g/cm³, calculate the mass in grams of the cylinder. Remember that the equation for volume is $v = \pi r^2 h$ (assume pi = 3.14)