

# Significant Figures

1. Solve for the correct number of significant figures.

- a.  $9.25 \div 4.970$   $1.861167 = 1.86$   
3      4
- b.  $1.54 \times 0.03078 \times 0.8$   $0.03792096 = 0.04$   
3      4      1
- c.  $(2.687 \times 10^8) \times (6.022 \times 10^{23})$   $1.618114 \times 10^{32} = 1.618 \times 10^{32}$   
4      4
- d.  $723 \times 1024$   $740,352 = 7.40 \times 10^5$   
3      4
- e.  $(6.7 \times 10^4) \div (5.93 \times 10^6)$   $1.129848 \times 10^{-2} = 1.1 \times 10^{-2}$   
2      3

2. Solve for the correct number of significant figures.

- a.  $45.7 - 2.981$   $42.719 = 42.7$  Round to 0.1 place
- b.  $62.89 + 7.3 + 9.86$   $80.05 = 80.1$  Round to 0.1 place
- c.  $27.1 + 55.88 + 425$   $507.98 = 508$  Round to 1's place
- d.  $623 + 7.3 - 320$   $310.3 = 310$  Round to 10's place

3. Solve for the correct number of significant figures

- a.  $(568.98 - 436.1) \div 9.7$   $\frac{132.88}{\text{only 4}} \div 9.7 = 13.6989 = 14$
- b.  $(3.14 \times 4.594) - 2.65$   $\frac{14.42516}{\text{only 3}} - 2.65 = 11.77516 = 11.8$
- c.  $(9334 + 23 - 9.7) \times (8.1 \times 10^5)$   $\frac{9,347.3}{\text{only 4 from this number used to find final sig figs}} \times 8.1 \times 10^5 = 7.5713 \times 10^9 = 7.6 \times 10^9$
- d.  $[(1.8 \times 10^6) \div (2.64 \times 10^5)] + 7.43$   $\frac{6.81818}{\text{only 2 sig from this number}} + 7.43 = 14.2481818$   
 Can justify one number behind the decimal 14.2