Significant Figures Worksheet **Name:**

Date: **Per:**

1. Define accuracy –
2. Define precision -
3. Determine whether the following numbers are exact numbers (E) or measured numbers (M).
   a) _____ 75.02mm
   b) _____ 18.90 mL
   c) _____ 12 test tubes
   d) _____ 0.0049 g
   e) _____ 50 pizzas
   f) _____ 150. cm

4. Why do we use significant figures for measured numbers?

5. Determine the number of significant figures in each of the following:
   a) 6.571 g
   b) 0.157 kg
   c) 28.0 ml
   d) 2500 m
   e) 0.0700000 g
   f) 30.07 g
   g) 0.106 cm
   h) 0.0067 g
   i) 0.0230 cm
   j) 26.509 cm
   k) 54.52 cm
   l) 0.12090 mm
   m) 2.690 g
   n) 43.07 cm

6. Round 742,396 to four, three, and two significant digits:
   a) four significant digits _____
   b) three significant digits _____
   c) two significant digits _____

7. Round 0.07284 to four, three, and two significant digits:
   a) four significant digits _____
   b) three significant digits _____
   c) two significant digits _____

8. Round 231.45 to four, three, and two significant digits:
   a) four significant digits _____
   b) three significant digits _____
   c) two significant digits _____

9. Round the quantity 827,000,000,000,000 picoseconds to show:
   a) 1 sig. fig. _____
   b) 2 sig. figs. _____
   c) 3 sig. figs. _____
   d) 4 sig. figs. _____

10. Rewrite the quantity 0.0031904 kg to show:
    a) 1 sig. fig. _____

    b) 2 sig. figs. _____

    c) 3 sig. figs. _____

11. Round each of the following to 3 significant figures:

    a) 16.8477 L _____ b) 5.6732 _____

    c) 0.14986 L _____ d) 861.85 _____

    e) 4.203×10^4 km _____ f) 5.0981×10^{-3} _____

    g) 0.00318756 m _____ h) 0.09025011 _____

12. On the line beside each number below, indicate the number of significant figures for the number:
    5800 _____ 0.053900 _____ 1.00 _____ 10 _____

13. Round the following numbers to 2 significant figures.
    a. 9.9099 m _____

    b. 0.9090 m _____

    c. 0.0909 m _____

14. Solve the following problems. Write the answer your calculator gives you. Then, write down the answer using correct significant figures. Don't forget units!

		calculator answer	**answer w/ sig. figs:**
a)	3.45 cm + 3.4 cm =		
b)	3.43 cm - 0.056 cm =		
c)	8.4 m + 10 m =		
d)	8.4 m + 10.0 m =		
e)	45 g + 8.345 m =		
f)	45 g + 8.345 kg =		
g)	4.5 s – 0.53 s =		
a)	5.43 g x 3.4 g =		
b)	8.001 m x 2.3 s =		
c)	800 cm x 6.45 s =		
d)	6.00 g / 0.05 ml =		
e)	5.01 g / 1,002,000 molecules =		