

Name _____

Practice Worksheet for Significant Figures

1. State the number of significant digits in each measurement.

- | | | |
|----------------------|----------------------------------|------------------------------------|
| 1) 2804 m | 2) 2.84 km | 3) 5.029 m |
| 4) 0.003068 m | 5) 4.6 x 10⁵ m | 6) 4.06 x 10⁻⁵ m |
| 7) 750 m | 8) 75 m | 9) 75,000 m |
| 10) 75.00 m | 11) 75,000.0 m | 12) 10 cm |

2. Round the following numbers as indicated:

To four sig. figs.:

3.682417 **21.860051** **375.6523** **112.511** **45.4673**

To one sig fig:

41.87 **2.473** **5.687524** **125.3** **8.235**

To two sig figs:

22.494 **79.2588** **0.03062** **3.4125** **41.86632**

Round the last row of numbers of problem #2 to 2 sig figs using scientific notation:

4. Express the following numbers in their equivalent standard notational form. Then identify how many sig figs are in the number.

	<u>Scientific notation</u>	<u>#sig figs</u>
1) 123,876.3	_____	_____
2) 1,236,840	_____	_____
3) 422000	_____	_____
4) 0.000000000000211	_____	_____
5) 0.000238	_____	_____
6) 0.0000205	_____	_____

4. Solve the following problems and report answers with *appropriate number of significant digits*.

1) **6.201 in. + 7.4 in. + 0.68 ft. + 12.0 in. =**

2) **1.6 s + 1.62 hr + 1200 min =**

3) **8.264 g - 7.8 g =**

4) **10.4168 m - 6.0 m =**

5) **12.00 kg + 15.001 kg =**

6) **1.31 cm x 2.3 cm =**

7) **5.7621 m x 6.201 m =**

8) **20.2 cm / 7.41 s =**

9) **40.002 g / 13.000005 g =**

5. Identify the sums or differences of the following with *appropriate number of sig figs*.

1) **$(8.41 \times 10^4) + (9.71 \times 10^4) =$**

2) **$(5.11 \times 10^2) - (4.2 \times 10^2) =$**

3) **$(8.2 \times 10^3) + (4.0 \times 10^3) =$**

4) **$(6.3 \times 10^{-2}) - (2.1 \times 10^{-2}) =$**

6. Express the product and the quotients of the following with the *appropriate number of sig figs*:

1) **$(3.56 \times 10^5) (4.21 \times 10^6) =$**

2) **$(2 \times 10^7) (8 \times 10^{-9}) =$**

3) **$(4.11 \times 10^{-6}) (7.51 \times 10^{-4}) =$**

4) **$8.45 \times 10^7 / 6.74 \times 10^3 =$**

5) **$9.7 \times 10^8 / 8.6 \times 10^{-2} =$**

6) **$4.7 \times 10^{-2} / 5.7 \times 10^{-6} =$**