For this entire worksheet, only use scientific notation if it is necessary for showing the correct number of sig. figs, or if you are instructed to use it!

1. Round or rewrite the given number so that it has 3 sig. figs., and so it has 2 sig. figs.

Number	with 3 s.f.	with 2 s.f.
900	900.	9.0×10 ²
60000	6.00 ×10	60 × 104
61111	61100	61000
0.03	0.0300	0.030
5600	5.60×103	5600
1300.9821	1.30 × 103	1300
0.0603779	0.0604	0.060
5000	5.00 × 103	5.0×10 ³
7481	7480	7500
7401	7.40×103	7400
2.3790	2.38	2.4
3030	3030	3.0×103

2. Multiplication and Division!

Look at all the given numbers and count how many significant figures they each have. Determine how many sig. figs. are in the given number with the fewest sig. figs. Round/report your answer to that number of significant figures.

5.1100S

78.3 / 1.42	= 111.186	
8.18 x 2.3	= 11.7531	12
28.71 / 25.2	1.1438247	1.14
48.82 / 24.41	2	2.000
60. / 0.0100	6000	6.0 × 10 3

Calculator Answer:

3. Addition and Subtraction:

Look at all the given numbers and determine the precision of each number.

For example, Is it reported to the tens' place?

ones' place?

one tenth (1 decimal place)

one hundredth (2 decimal places)

one thousandth? (3 decimal places)

Determine which number is reported to the least precision (for example, the fewest number of decimal places.) Round/report your answer to the same precision as the least precise number.

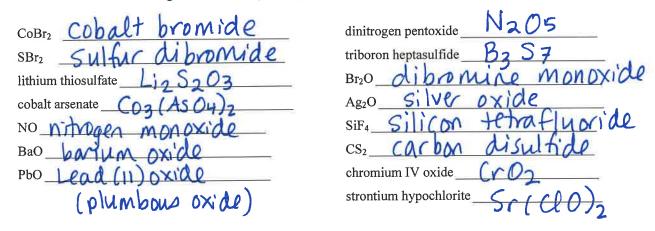
Correct sig. fig. answer:

	Calculator Answer:	Correct sig. fig. answer:
35.12 + 2.3	= 37.42	3 7.4
6.3 + 3.7	= 10	10.0
6.8 + 102	= 108.8	109
16.387 - 1.2	= 15.187	15.2
116.92 – 114.72	= 2.2	2.20

4. Mixed Practice! Make the following calculations, and then round/report your answer to the correct number of significant figures.

	Calculator Answer	Correct sig. fig. answer
126.2 + 4.41	= 130.61	130.6
146.72 *7.96	= 1167.8912	1170_
364.8 / 4.56	= 80	80.0
36480 / 4.56	= 8000	8.00×103
230.2 - 7.2	= 223	223.0
2.49 x 86.72	= 215.9328	216
2.49 x 2008.1	= 5000.169	5.00×103
50.9 + 80.7	= 131.6	131.6
14.181 - 3.12	11.061	11.06
14.181 + 3.12	17.301	17.30
14.18 / 13.21	1.073429	1.073
15000. / 0.25	60000	6.0 ×104
14.18 * 13.21	187.3178	187.3
3.42 - 2.62	0.8	0.80
12621 / 42.07	300	300.0
62100 / 1.5525	40000	4.00×105

5. Formula writing review: Fill in the missing name or formula for each compound. Be sure to name it according to the correct system (ionic or covalent)



Each chemical equation below shows two elements reacting to form a compound. For each reaction:

- a) classify the compound(s) that form as ionic or covalent.
- b) name the compound(s) that form in the reaction.
- c) state whether the each reacting element will need to gain, lose, or share electrons to bond in the compound.
- d) If electrons are lost or gained, indicate which element will gain electrons and which will lose electrons.

6.
$$3I_{2(s)} + 2AI_{(s)} \longrightarrow 2AII_{3(s)} + energy$$
c/d: Alloses energy
a. ionic b. aluminum iodide I_2 guns energy

7.
$$3I_{2(s)} + N_{2(g)} \longrightarrow 2NI_{3(g)} + energy$$
 c/d: Nand I
a. Covalet b. Nitroger triiodide Share e