## Calculations with Significant Figures Name\_\_\_\_\_

When doijng calculations with significant figrures, it is important that your answers not lie about what you know. Especially when using calculators, you will tend to get answers with 8 or more decimal places. Below are some examples of calculations that keep track of significant figures.

Addition and subtraction: THINK ONLY ABOUT DECIMAL PLACES Round the answer to the same number of <u>decimal places</u> as the term which had the *least* number of decimal places.

Ex:	3.468 <- 3 decimal places	3.40
	40.5 <- 1 decimal place	-2.532
	+ <u>60.56</u> <- 2 decimal places	0.868 rounded to 0.87
	104.528 rounded to 104.5	

Multiplication and Division: THINK ABOUT ALL SIGNIFICANT DIGITS Round the final answer to the same number of <u>significant digits</u> as the term with the *least* number of significant digits.

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Ex:	10.4 <-3 significant digits		$\frac{3.03}{0.30} = 18.76666666$ rounded to 19
	<u>x5.7</u> <-	2 significant digits	
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On seperate sheet of paper solve the following problems experssing the answer with the correct number of significant digits.

11) 50.46 x 0.34
12) 0.333 x 12.0
13) 120 x 8.60
14) 56.2 x 1.3
15) 56.2 x 1.301
16) 37 x 37
17) 5.60/4.2
18) 1.560/0.12
19) 0.111/50.0
20) 0.031/5.0

## Answers to Calculations with Significant Figures

1) 8.8	11) 17
2) 8.976	12) 4.00
3) 120.8	13) 1000
4) 120.83	14) 73
5) 10.8	15) 73.1
6) 2.76	16) 1400
7) 5.2	17) 1.3
8) 0.979	18) 13
9) 659.8	19) 0.00222
10) 0.3	20) 0.0062