

Significant Digits

Name: _____

1. Determine the number of significant digits for each value.

Value	Number of significant digits
34608	
0.3468	
3.4680	
0.03468	
0.034680	
3.4608	
0.034608	
0.0003468	
0.00034680	
0.00034608	
5000	
5×10^4	
5.00×10^4	
5.0000×10^4	
5005	
108070.0	
0.5000	
67.000	
0.0090	
246.7	
1.0084	
100	
100.0	

2. Round each value to the indicated number of significant digits

Value	Number of Significant Digits	Rounded Value
34608	2	
0.3468	5	
3.4680	3	
0.03468	1	
0.034680	2	
3.4608	3	
0.034608	2	
5000	2	
5×10^4	3	
5.00×10^4	1	
5005	5	
108070.0	1	
0.5000	2	
67.000	3	
0.0090	1	
246.7	1	
1.0084	3	
100	2	

3. Solve for each of the following:

RULE: When adding or subtracting your answer can only show as many decimal places as the measurement having the fewest number of decimal places.

Perform the following calculations and round according to the rule above.

1) $4.60 + 3 =$

2) $0.008 + 0.05 =$

3) $22.4420 + 56.981 =$

4) $200 - 87.3 =$

5) $67.5 - 0.009 =$

6) $71.86 - 13.1 =$

RULE: When multiplying or dividing, your answer may only show as many significant digits as the multiplied or divided measurement showing the least number of significant digits.

Perform the following calculations and round according to the rule above.

1) $13.7 \times 2.5 =$

2) $200 \times 3.58 =$

3) $0.00003 \times 727 =$

4) $5003 / 3.781 =$

5) $89 / 9.0 =$

6) $5000 / 55 =$

4. Solve the following problems and express the results with the correct number of significant figures.

a. $3.894 \times 2.16 =$

b. $2.96 + 8.1 + 5.0214 =$

c. $2.17 + 4.32 + 401.278 + 21.826 =$

d. $485 \div 9.231 =$

e. $2.46 \times 2 =$

f. $9.146 - 9.137 =$

g. $(5.12 \times 10^4) * (6.8726 \times 10^{-9}) =$