South Pasadena • Chemistry

Name _____
Date _____ Period _____

Unit 1 • Observations, Models, & Experiments

SIGNIFICANT FIGURES & ROUNDING

A. Indicate the number of significant figures then round each to the number of significant figures indicated.

For example:

1.234 has _____4___ significant figures and, rounded to 2 significant figures, is ___1.2____

1. 0.6034 has _____ significant figures and, rounded to 2 significant figures, is _____
2. 12,700 has _____ significant figures and, rounded to 2 significant figures, is _____
3. 12,700.00 has _____ significant figures and, rounded to 1 significant figures, is _____
4. 0.000983 has _____ significant figures and, rounded to 2 significant figures, is _____
5. 123342.9 has _____ significant figures and, rounded to 5 significant figures, is _____
6. 6.023×10^{23} has _____ significant figures and, rounded to 2 significant figures, is _____
7. .005600 has _____ significant figures and, rounded to 1 significant figures, is _____
8. 10000.5006 has _____ significant figures and, rounded to 5 significant figures, is _____
9. 2.0×10^{-3} has _____ significant figures and, rounded to 1 significant figures, is _____
10. 3.456110 has _____ significant figures and, rounded to 3 significant figures, is _____

B. Given calculations with the calculator answer, write the answers with the appropriate number of significant figures.

Example :

6.00 x 3.00 = 18 The answer should be _____18.0_____

1. 23 + 46 = 69 The answer should be _____
2. 23.0 + 46.0 = 69 The answer should be _____
3. 253 + 345.8 = 598.8 The answer should be _____
4. 56 – 35 = 21 The answer should be _____
5. 56.00 – 35.0 = 21 The answer should be _____
6. 46 x 12 = 552 The answer should be _____
7. 3.24 x 5.63 = 18.2412 The answer should be _____

8 (2.355 + 2.645) x 10.00 = 50 The answer should be _____

9 654 ÷ 32 = 20.4375 The answer should be _____

10. .024 x .063 = 1.512×10^{-03} The answer should be _____