

Determining Significant Figures

Name: _____

I. Convert the following numbers into scientific notation.

- | | | | |
|--------------|-------|---------------|-------|
| 1) 0.00034 | _____ | 6) 0.00603 | _____ |
| 2) 0.000006 | _____ | 7) 0.135 | _____ |
| 3) 1,340,000 | _____ | 8) 65,510 | _____ |
| 4) 1,250,000 | _____ | 9) 0.012 | _____ |
| 5) 4,500 | _____ | 10) 0.0000630 | _____ |

II. Convert each scientific notation number back to standard form (long form).

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|--------------------------|-------|---------------------------|-------|
| 1) 6.23×10^{-3} | _____ | 6) 5.513×10^5 | _____ |
| 2) 1.12×10^4 | _____ | 7) 1.001×10^{-1} | _____ |
| 3) 7.50×10^{-2} | _____ | 8) 8.25×10^0 | _____ |
| 4) 2.4×10^{-4} | _____ | 9) 3.02×10^4 | _____ |
| 5) 3.08×10^2 | _____ | 10) 9.83×10^{-4} | _____ |

III. Indicate the number of significant figures in each measurement.

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|---------------|-------|---------------|-------|
| 1) 0.009 kg | _____ | 11) 10.5 cL | _____ |
| 2) 0.090 hg | _____ | 12) 32.0 s | _____ |
| 3) 0.900 g | _____ | 13) 0.40 dks | _____ |
| 4) 9.00 km | _____ | 14) 16,000 mL | _____ |
| 5) 9.09 m | _____ | 15) 20,002 mg | _____ |
| 6) 1,214 mL | _____ | 16) 14.4 dm | _____ |
| 7) 16.03 g | _____ | 17) 1.010 cm | _____ |
| 8) 0.00030 kL | _____ | 18) 0.4040 cm | _____ |
| 9) 120 m | _____ | 19) 20.000 s | _____ |
| 10) 1001 s | _____ | 20) 0.005 hL | _____ |