

ANSWER KEY

EXTRA PRACTICE: Determining Significant Figures

Name: _____

I. Convert the following numbers into scientific notation.

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|--------------|-----------------|---------------|------------------|
| 1) 0.00034 | <u>3.4 E-4</u> | 6) 0.00603 | <u>6.03 E-3</u> |
| 2) 0.000006 | <u>6.0 E-6</u> | 7) 0.135 | <u>1.35 E-1</u> |
| 3) 1,340,000 | <u>1.34 E 6</u> | 8) 65,510 | <u>6.551 E 4</u> |
| 4) 1,250,000 | <u>1.25 E 6</u> | 9) 0.012 | <u>1.2 E-2</u> |
| 5) 4,500 | <u>4.5 E 3</u> | 10) 0.0000630 | <u>6.30 E-5</u> |

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

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|--------------|----------------|---------------|-----------------|
| 1) 6.23 E -3 | <u>0.00623</u> | 6) 5.513 E 5 | <u>551,300</u> |
| 2) 1.12 E 4 | <u>11,200</u> | 7) 1.001 E -1 | <u>0.1001</u> |
| 3) 7.50 E -2 | <u>0.0750</u> | 8) 8.25 E 0 | <u>8.25</u> |
| 4) 2.4 E -4 | <u>0.00024</u> | 9) 3.02 E 4 | <u>30,200</u> |
| 5) 3.08 E 2 | <u>308</u> | 10) 9.83 E -4 | <u>0.000983</u> |

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

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