

Measurement, Uncertainty, and Working with Significant Digits Practice

Answer the following questions on lined paper.

1. How many significant figures are in each of the following?

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|----------|-----------------------|-----------------------|-----------|
| a. 3.65 | b. 601.00 | c. 3.00×10^4 | d. 0.0082 |
| e. 0.65 | f. 451.1 | g. 40.0×10^1 | h. 250 |
| i. 0.03 | j. 1.20 | k. 40.00 | l. 4000 |
| m. 30.05 | n. 3.01×10^6 | o. 0.000 07 | |

2. Round each of the following number to three (3) significant digits.

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|-------------------------|-----------|------------------------|
| a. 7.656 | b. 50.049 | c. 0.0002349 |
| d. 0.0966 | e. 10.05 | f. 3.008×10^8 |
| g. 5.0148×10^3 | h. 5.8330 | i. 0.06655 |
| j. 60.32 | k. 72.35 | l. 3.775×10^5 |

3. Add or subtract the following numbers to the correct number of significant digits. Remember, the limit to the answer is the least number of decimal places.

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|------------------------------|----------------------------|
| a. $12 + 0.031 + 7.969$ | b. $126.96 - 63.389$ |
| c. $83.49 - 26.618$ | d. $30.5 + 16.82 + 85.216$ |
| e. $0.085 + 0.062 + 1.9$ | f. $2300 - 872$ |
| g. $0.08568 - 0.065$ | h. $143.0 + 289.25 + 1100$ |
| i. $3.419 + 3.912 + 7.05183$ | j. $236 - 8$ |

4. Multiple or divide the following numbers to the correct number of significant digits.

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|-------------------------|--------------------------|---|
| a. 2.89×4.01 | b. 13.7×6.2 | c. $24789.4 \div 43.5$ |
| d. 5.00×7.3216 | e. $88.071 \div 4.216$ | f. $4.819 \div 9.852$ |
| g. 5.0×5 | h. $80 \div 6.134$ | i. $35.711 \div 8.00$ |
| j. 150×4.68 | k. $1300 \div 68.75$ | l. $(4.0 \times 10^2) \times (2.101 \times 10^3)$ |
| m. 282.6×3 | n. $109.3758 \div 5.813$ | o. $(1.003 \times 10^2) \times 52$ |
| p. 10.0×0.021 | q. $6.058 \div 0.85$ | r. 5.0×5.0 |
| s. 20.8×123.1 | t. $4.23 \div 0.0018$ | |