

Name: _____

Prog. Yr. & Sec.: _____

Activity 1 Significant Figures and Scientific Notation

A. Find the number of significant digits in the following measurements.

- | | |
|------------------------------|------------------------------------|
| 1. 10100 mm _____ | 6. 3.500×10^{-2} s _____ |
| 2. 0.0874000 cL _____ | 7. 6.19×10^{-1} mi _____ |
| 3. 170.5 km _____ | 8. 1.00×10^3 mg _____ |
| 4. 5000 cm^3 _____ | 9. 2×10^2 °C _____ |
| 5. 36 kg _____ | 10. 5.920×10^{-1} A _____ |

B. Write the following measurements in the scientific notation format.

- | | |
|------------------------------|-------------------------|
| 1. 10100 mm _____ | _____ $\times 10$ _____ |
| 2. 0.0874000 cL _____ | _____ $\times 10$ _____ |
| 3. 170.5 km _____ | _____ $\times 10$ _____ |
| 4. 5000 cm^3 _____ | _____ $\times 10$ _____ |
| 5. 36 kg _____ | _____ $\times 10$ _____ |

C. Round off the following measurements to the indicated number of significant digits.

- | | | |
|------------------------------|------------------------|-------|
| 1. 10100 mm | (2 significant digits) | _____ |
| 2. 0.0874000 cL | (3 significant digits) | _____ |
| 3. 36 kg | (1 significant digit) | _____ |
| 4. 2.5689×10^{-2} s | (4 significant digits) | _____ |
| 5. 5.920×10^{-1} A | (3 significant digits) | _____ |

D. Perform the following operations.

- | | | |
|--|---|-----------------------|
| 1. (0.17362 m) (31.22 m) (170.06 m) | = | _____ m^3 |
| 2. $\frac{9.042 \text{ g}}{(5.24 \text{ cm}) (9.5 \text{ cm})}$ | = | _____ g/cm^2 |
| 3. $3.500 \times 10^{-2} \text{ s} + 4.24 \times 10^{-2} \text{ s}$ | = | _____ s |
| 4. $\frac{(36 \text{ kg} - 12.5 \text{ kg})}{(80.2 \text{ m}^2 + 12 \text{ m}^2)}$ | = | _____ g/cm^2 |
| 5. $\frac{7.50 \times 10^2 \text{ mg}}{3.0 \times 10^1 \text{ cm}} + \frac{1.00 \times 10^3 \text{ mg}}{4.5 \times 10^2 \text{ cm}}$ | = | _____ mg/cm |