

Name: \_\_\_\_\_

Block: \_\_\_\_\_

## Significant Figures & Rounding

1. For each of the following,

- Underline the significant figures in the number.
- Write the uncertainty as  $\pm$  the appropriate quantity.

(a) 57,300  $\pm 100$  ← Sample problem with correct answer.

(b) 13,500

(c) 26.0012

(d) 02452

(e) 0.000 000 025

(f) 320.

(g)  $6.0 \times 10^{-7}$

(h) 150.00

(i) 10

(j) 0.005 310 0

2. Round off each of the following numbers as indicated.

(a) 13,500 to the nearest 1,000

(b) 26.0012 to the nearest 0.1

(c) 02452 to the nearest 10,000

(d) 0.000 025 to the nearest 0.000 01

(e) 320. to the nearest 10

(f)  $6.0 \times 10^{-7}$  to the nearest  $10^{-6}$

(g) 150.00 to the nearest 100

(h) 10 to the nearest 100

3. Solve the following math problems and express the answer to the correct number of significant figures, with the correct value for uncertainty.

(a)  $123,456,789 \times 10$

(b)  $3.14159\ 26535\ 89793\ 23846 \times 24^2$

(c)  $2.71828 + 22.4 - 8.31 - 62.4$

(d)  $23.5 + 0.87 \times 6.02 - 105$  ← Remember the correct order of operations (PEMDAS)!

(e)  $\frac{-12 \pm \sqrt{37.5^2 - 4.000(8.1)(7.6)}}{2.000(8.1)}$  (Note: this problem has two answers.)