

## WS 2-H-Significant Figures Worksheet

### Honors Chemistry

#### I State how many significant figures are in the following.

- |           |       |              |       |
|-----------|-------|--------------|-------|
| 1. 16.30  | _____ | 6. 0.0089    | _____ |
| 2. 0.0706 | _____ | 7. 0.400     | _____ |
| 3. 105000 | _____ | 8. 0.00390   | _____ |
| 4. 12.03  | _____ | 9. 40086     | _____ |
| 5. 1400   | _____ | 10. 0.002508 | _____ |

#### II Round off to the indicated number of significant figures.

- |                      |       |                        |       |
|----------------------|-------|------------------------|-------|
| 11. 4751.9 to 3 sf's | _____ | 16. 0.06372 to 3 sf's  | _____ |
| 12. 4751.9 to 2 sf's | _____ | 17. 0.06372 to 2 sf's  | _____ |
| 13. 808.57 to 4 sf's | _____ | 18. 2.048 to 3 sf's    | _____ |
| 14. 808.57 to 3 sf's | _____ | 19. 2.048 to 2 sf's    | _____ |
| 15. 808.57 to 2 sf's | _____ | 20. 51364.19 to 2 sf's | _____ |

**III** Perform the following operations, expressing your answers to the proper number of significant figures. Write the calculator answer first, then the rounded answer.

|                            | Calculator Answer | Answer Rounded to SF |
|----------------------------|-------------------|----------------------|
| 21. 12 x 4.91765           | _____             | _____                |
| 22. 4.613 x 0.0158         | _____             | _____                |
| 23. 8.07 x 45.9            | _____             | _____                |
| 24. $\frac{4.82}{1.337}$   | _____             | _____                |
| 25. $\frac{0.00195}{0.39}$ | _____             | _____                |

### Practice Problems:

Identify the number of significant figures in each of the following:

1. 0.0054 → \_\_\_\_\_
2. 402 → \_\_\_\_\_
3. 3.200 → \_\_\_\_\_
4. 0.000789 → \_\_\_\_\_
5. 1200 → \_\_\_\_\_
6.  $7.800 \times 10^3$  → \_\_\_\_\_

## Significant Figures in Calculations

### Instructions:

Round your answers to the correct number of significant figures.

1.  $23.45 + 7.1 =$  \_\_\_\_\_ (Round to 2 sig figs)
2.  $4.789 \times 3.2 =$  \_\_\_\_\_ (Round to 2 sig figs)
3.  $0.09876 \div 0.004 =$  \_\_\_\_\_ (Round to 1 sig fig)
4.  $5.6789 - 2.34 =$  \_\_\_\_\_ (Round to 3 sig figs)

## Part 3: Scientific Notation

### Instructions:

Write the following numbers in scientific notation.

1. 0.000567 → \_\_\_\_\_
2. 340000 → \_\_\_\_\_
3.  $1.23 \times 10^6$  → \_\_\_\_\_
4. 0.00000092 → \_\_\_\_\_
5. 700 → \_\_\_\_\_

### Write these in standard form:

1.  $3.45 \times 10^{-3}$  → \_\_\_\_\_
2.  $1.78 \times 10^4$  → \_\_\_\_\_
3.  $9.21 \times 10^0$  → \_\_\_\_\_