

## Significant Figure Practice

Name \_\_\_\_\_

Period \_\_\_\_\_ Date \_\_\_\_\_

Write the number of significant figures in the following measurements.

- |                  |                                  |                                 |                    |
|------------------|----------------------------------|---------------------------------|--------------------|
| 1. _____ 2.708   | 7. _____ 589000                  | 12. _____ $3.67 \times 10^{-4}$ | 17. _____ 540300   |
| 2. _____ 16.3050 | 8. _____ $6.38 \times 10^9$      | 13. _____ 507.7800              | 18. _____ 4506.003 |
| 3. _____ 50.007  | 9. _____ 50800                   | 14. _____                       | 19. _____ 287.345  |
| 4. _____ 3000010 | 10. _____ $4.678 \times 10^{22}$ | 0.000000875                     | 20. _____ 56.000   |
| 5. _____ 0.00045 |                                  | 15. _____ 0.00480               |                    |
| 6. _____ 0.00458 | 11. _____ .789.006               | 16. _____ 3322.008              |                    |

1. Round off the following numbers to three significant figures.

- |                         |                            |
|-------------------------|----------------------------|
| (a) 4325                | (d) 7.8939                 |
| (b) $6.873 \times 10^3$ | (e) $9.237 \times 10^{-3}$ |
| (c) 0.17354             | (f) 0.0299817              |

2. How many significant figures does each of the numbers contain?

- |                                 |                                 |
|---------------------------------|---------------------------------|
| (a) 0.0278 meter                | (f) 0 2003 ton                  |
| (b) 1.3 centimeters             | (g) $4.69 \times 10^4$ tons     |
| (c) 1.00 foot                   | (h) $1 \times 10^{12}$ atoms    |
| (d) 8 021 yards                 | (i) $1.73 \times 10^{24}$ atoms |
| (e) $7.98 \times 10^{-3}$ pound |                                 |

3. Express the following numbers in standard exponential form with the indicated number of significant figures.

- |                            |  |
|----------------------------|--|
| (a) 1000 (2 sig. fig.)     | (d) 0.000098765 (5 sig. fig.)                        |
| (b) 43,927 (3 sig. fig.)   | (e) 10,000 (you decide how many significant figures) |
| (c) 0.000286 (3 sig. fig.) |  |

4. Express the following exponentials as ordinary numbers.

- |                           |                           |
|---------------------------|---------------------------|
| (a) $7.23 \times 10^4$    | (d) $7.51 \times 10^{-7}$ |
| (b) $8.193 \times 10^2$   | (e) $5.43 \times 10^0$    |
| (c) $1.98 \times 10^{-3}$ |                           |