Significant figure practice #1 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ch. 3 Period \_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_

How many significant figures are in the following measurements?

1. \_\_\_\_\_ 2.708 6. \_\_\_\_\_ 0.00458 11. \_\_\_\_\_ 789.006 16. \_\_\_\_\_ 3322.008
2. \_\_\_\_\_ 16.3050 7. \_\_\_\_\_ 589000 12. \_\_\_\_\_ 3.67 X10-4 17. \_\_\_\_\_ 540300
3. \_\_\_\_\_ 50.007 8. \_\_\_\_\_ 6.38 X 109 13. \_\_\_\_\_ 507.7800 18. \_\_\_\_\_ 4506.003
4. \_\_\_\_\_ 3000010 9. \_\_\_\_\_ 50800 14. \_\_\_\_\_ 0.00000875 19. \_\_\_\_\_ 287.345
5. \_\_\_\_\_ 0.00045 10. \_\_\_\_ 4.678 X 1022 15. \_\_\_\_\_ 0.00480 20. \_\_\_\_\_ 56.000

Round off the following numbers to three significant figures.

1. 4325 \_\_\_\_\_\_\_\_\_ 2. 6.873 X 103 \_\_\_\_\_\_\_\_\_\_\_\_\_ 3. 0.17354 \_\_\_\_\_\_\_\_\_\_\_

4. 7.8939 \_\_\_\_\_\_\_\_\_ 5. 9.237 X 10-3 \_\_\_\_\_\_\_\_\_\_\_\_\_ 6. 0.0299817 \_\_\_\_\_\_\_\_\_

How many significant figures does each of the measured numbers contain?

1. 0.0278 meters \_\_\_\_\_ 2. 1.3 centimeters \_\_\_\_\_ 3. 1.00 foot \_\_\_\_\_

4. 8.021 yards \_\_\_\_\_ 5. 7.98 x 10-3 pounds \_\_\_\_\_ 6. 0.2003 tons \_\_\_\_\_

7. 4.69 X 104 tons \_\_\_\_\_\_ 8. 1 X 1012 atoms \_\_\_\_\_ 9. 1.73 X 1024 atoms \_\_\_\_\_

Express the following numbers in standard exponential form (scientific notation) with the indicated number of significant figures.

1. 1000 (2 sig fig) \_\_\_\_\_\_\_\_\_\_\_\_\_ 2. 43,927 (3 sig fig) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. 0.000286 (3 sig fig) \_\_\_\_\_\_\_\_\_\_\_ 4. 0.000098765 (5 sig fig) \_\_\_\_\_\_\_\_\_\_\_

5. 10,000 (2 sig fig) \_\_\_\_\_\_\_\_\_\_\_\_\_

Express the following exponentials as ordinary numbers (expanded form).

1. 7.23 X 104 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. 8.193 X 102 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. 1.98 X 10 -3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. 7.51 X 10-7 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. 5.43 X 100 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_