Significant Figures Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Chemistry Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mrs. Booth Class Period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Determine the number of significant figures in each of the following:
   1. 20.57 mm \_\_\_\_\_\_\_\_\_\_\_\_\_\_ g. 5.40 kg \_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. 90.81 mL \_\_\_\_\_\_\_\_\_\_\_\_\_\_ h. 120 pm \_\_\_\_\_\_\_\_\_\_\_\_\_
   3. 21 m \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ i. 105.8 cm \_\_\_\_\_\_\_\_\_\_\_\_
   4. 0.0094 g \_\_\_\_\_\_\_\_\_\_\_\_\_\_ j. 1000 m \_\_\_\_\_\_\_\_\_\_\_\_\_
   5. 150 cm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ k. 101.0100 mm \_\_\_\_\_\_\_\_
   6. 150. cm \_\_\_\_\_\_\_\_\_\_\_\_\_\_ l. 0.00210 g \_\_\_\_\_\_\_\_\_\_\_\_
2. Rewrite the quantity 728,000,000,000,000 s to show:
   1. 1 SF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. 2 SF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. 3 SF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. 4SF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. 5 SF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Rewrite the quantity 0.00000040913 m to show:
   1. 1 SF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. 2 SF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. 3 SF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. 4SF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. 5 SF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Round each of the following numbers to 3 significant figures:
   1. 77.4861 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ e. 2.3765 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. 0.68961 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ f. 581.68 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. 3.024 x 10 4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ g. 1.8950 x 10 -3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. 0.00657813 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ h. 0.01105209 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Underline each ZERO in each number that is significant.
   1. 2.03 e. 1.0030 i. 0.009
   2. 1.0 f. 967,000 j. 0.005
   3. 2.00 g. 5.10 k. 0.005670
   4. 0.00860 h. 0.000065 l. 780.00
6. How many significant figures do the following numbers have?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1234 |  | 0.023 |  | 890 |  |
| 91010 |  | 9010.0 |  | 1090.0010 |  |
| 0.00120 |  | 3.4 x 10 4 |  | 9.0 x 10 -3 |  |
| 9.010 x 10 -2 |  | 0.00030 |  | 1020010 |  |
| 780. |  | 1000 |  | 918.010 |  |
| 0.0001 |  | 0.00390 |  | 8120 |  |
| 7.991 x 10 -10 |  | 72 |  | 0.0224 |  |
| 3.000 |  | 4.530 |  | 54,000 |  |