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| Significant figures  EHS Cλ3MIs+rγ  Mr. Genest |  | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  visit http:genest.weebly.com |

1. Convert 788 Mg to grams: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Convert 911.77 kg to mg: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. In the measurement 34000 g, which digit is estimated?
4. An object is known to have a mass of 3.145 g. A student makes three measurements and obtains the results; 3.102 g, 3.105 g, and 3.101 g. Are the student’s measurements accurate or precise?
5. In the measurement 0.3341 g, which digit is estimated?
6. A rock is known to have a mass of 12.650 g. A student obtains the results; 12.650, 13.650, and 11.650. Are the measurements accurate or precise?

Determine the number of significant figures in the following measurements.

1. 100.1 g \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 473 mL\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 0.002 m\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. 4200 km\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. 0.11010 L\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. 104.20 g\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. 1,700,000 km\_\_\_\_\_\_\_\_\_\_\_\_\_
8. 0.00020 kg\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. 842.0 cm\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. 640,002 m\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. 10,000 s\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. 190.60 g\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. 1.0004230 g\_\_\_\_\_\_\_\_\_\_\_\_\_
14. 0.004200 m\_\_\_\_\_\_\_\_\_\_\_\_\_
15. 7000.07 mm\_\_\_\_\_\_\_\_\_\_\_\_\_
16. 35,000 km\_\_\_\_\_\_\_\_\_\_\_\_\_

Round each of the following to 3 significant figures.

1. 2.396 g\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 6.333 g\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 2.500 g\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. 3.805 g\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. 23.15 g\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. 16.2455 m\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. 93.45 cm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. 21.15 cm\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. 1.2793 kg\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. 0.10625 kPa\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. 0.0037486 m\_\_\_\_\_\_\_\_\_\_\_\_
12. 0.01245 s\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. 0.10652 g\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
14. 0.048449 ns\_\_\_\_\_\_\_\_\_\_\_\_\_\_
15. 0.20000 L\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
16. 101.00 fs\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
17. 0.112453 g\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

39)0.010010 L\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Convert 45.66 mL to μL: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Convert 0.00456 kg to cg: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Convert 23000 mm to meters: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_