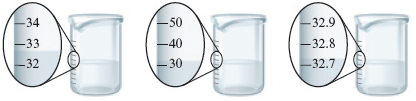
Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ UGA myID\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Convert 0.0004571 miles into scientific notation.
   1. 4.571 x 105
   2. 4.571 x 10-4
   3. 4.571 x 10-3
   4. 4.571 x 10-5
   5. 4.57 x 104
2. Convert 25,657 feet into scientific notation.
   1. 2.57 x 104
   2. 2.5657 x 10-4
   3. 2.5657 x 104
   4. 2.57 x 105
   5. 2.5657 x 10-5
3. Convert the number 6.43 x 10-4 to decimal format.
   1. 0.000643
   2. 0.00643
   3. 0.0643
   4. 0.643
   5. 64300
4. Convert the number 1.55 x 102 to decimal format.
   1. 15.5
   2. 155
   3. 0.155
   4. 0.0155
   5. 1550
5. Which statement(s) is/are true about exact numbers? Select any that apply.
   1. Exact numbers control the number of significant figures reported for a calculation.
   2. Exact numbers contain an unlimited number of significant figures.
   3. Exact numbers refer to items that can be counted.
   4. Exact numbers can be measurements if the measuring instrument is sufficiently precise.

Label each number as an exact number (a) or measurement (b).

1. 55 oranges
2. 1.67 liters
3. 22 feet
4. 10 pencils
5. 20.

How many significant figures are reported for each beaker? Your multiple-choice options are:

* 1. 1
  2. 2
  3. 3
  4. 4

1. 12. 13.

Images from Zumdahl, Introductory Chemistry

1. Which number does not contain four significant figures?
   1. 1.060
   2. 1.600
   3. 0.006
   4. 1.006
   5. 1000.
2. How many significant figures are in the measurement 8.7300 grams?
   1. 5
   2. 4
   3. 6
   4. 3
   5. 1
3. How many significant figures are in the measurement 0.080320?
   1. 3
   2. 4
   3. 5
   4. 6
   5. 7
4. How many significant figures are in the measurement 3.10 x 105 mg?
   1. 2
   2. 5
   3. 4
   4. 3
   5. 8
5. What is the answer to the calculation 5.5 m(4.22 m) to the correct number of significant figures?
   1. 23.21 m2
   2. 23 m2
   3. 23.2 m2
   4. 23.0 m2
   5. 23.210 m2
6. How many significant figures are in the answer to the calculation 214.88 + 9.1?
   1. 3
   2. 5
   3. 2
   4. 4
   5. 6
7. The answer for the calculation (3.46 – 3.43)/2.3 to the correct number of significant figures is:
   1. 1.30 x 10-2
   2. 1.3 x 10-2
   3. 1.31 x 10-2
   4. 1.0 x 10-2
   5. 1 x 10-2
8. Which conversion factor is correct?
   1. 1 km = 1 x 10-3 m
   2. 1 g = 1 x 103 cg
   3. 1 cm = 1 x 102 m
   4. 1 mg = 1 x 10-2 g
   5. 1 nm = 1 x 10-9 m
9. Convert 3.32 x 10-5 m into mm
   1. 3.32 x 10-2 mm
   2. 3.32 x 10-8 mm
   3. 3.32 x 101 mm
   4. 3.32 x 10-11 mm
   5. 3.32 x 104 mm
10. Convert 24,595 µm to km and report the answer in scientific notation.
    1. 2.4595 x 10-2 km
    2. 2.4595 x 10-5 km
    3. 2.4595 x 10-8 km
    4. 2.4595 x 10-9 km
    5. 2.4595 x 1013 km
11. Convert 3,465 cm to feet. 1 in = 2.54 cm, 1 ft = 12 in
    1. 113.7 ft
    2. 1.056 x 105 ft
    3. 1.637 x 104 ft
    4. 733.4 ft
12. A gasoline can holds 5.0 gallons of gas. How many mL is this? 1 gal = 3.78 L
    1. 19 mL
    2. 1.3 mL
    3. 1.9 x 104 mL
    4. 1.3 x 103 mL
    5. 1.9 x 10-2 mL
13. A cyclist rides at an average speed of 18.0 miles per hour. If she wants to bike 212 km, how many hours must she ride? 1 in = 2.54 cm, 1 ft = 12 in, 1 mile = 5,280 ft.
    1. 11.7 hours
    2. 7.32 hours
    3. 19.0 hours
    4. 7.32 x 10-10 hours
    5. 2.37 x 103 hours
14. A standard-sized living room is 14 ft wide by 9.0 ft high. What is the living room’s area in square meters? 1 ft = 12 inches, 1 inch = 2.54 cm.
    1. 12 m2
    2. 38 m2
    3. 1.3 x 102 m2
    4. 1.2 x 103 m2
    5. 3.9 x 103 m2