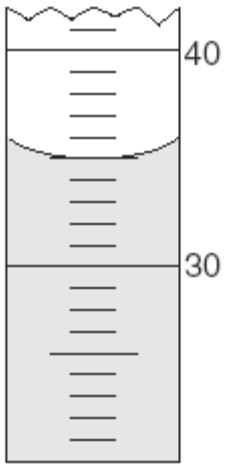
Safety & Scientific Notation

1.
What does the metric prefix milli mean?
2.
What does the metric prefix kilo mean?
3.
Express 5,981,025,000 in exponential form using standard scientific or "e" notation (for example, 105 = 1.05e2). Enter the correct number of significant figures.
4.
Express .0370700 in exponential form, using standard scientific or "e" notation (for example, 105 = 1.05e2). Enter the correct number of significant figures.
5.
The concept of ____ indicates the ability of a person to measure consistently.
6.
The concept of ____ indicates how close the experimental answer is to the true value.
7.
The solid and liquid phases of water can exist in a state of equilibrium at 1 atmosphere of pressure and a temperature of
8.
During a laboratory activity, a student combined two solutions. In the laboratory report, the student wrote "A yellow color appeared." The statement represents the student's recorded
9.
The diagram below represents a portion of a 100 milliliter graduated cylinder. What is the reading of the meniscus?



10.
Which of the following observations are qualitative and which are quantitative?
(a) I wear a size 3/4 hat.
(b) My favorite shirt is blue.
(c) Robins like to eat worms after a rainstorm.
(d) The weather bureau reported that hailstones measuring half an inch in diameter fell during last night's storm.
(e) Washington and Baltimore are two very interesting cities to visit.
(f) Washington and Baltimore are only 40 miles apart.

11.
How would the the number 1.589×10^{3} be written in ordinary decimal notation?

12.
Write each of the following as an "ordinary" decimal number.
(a) 5.449×10^{-2}
(b) 6.449×10^{3}
(c) 2.475×10^{-6}
(d) 1.059×10^{4}

13.
Express each of the following numbers in standard scientific notation.
(a) 0.005225
(b) 5225
(c) 6132785
(d) 0.1875
(e) 91000000
(f) 18.25×10^{-2}
(g) 0.001825×10^{-5}
(h) 6.00

14.
Express each of the following numbers in standard scientific notation.
(a) 9367415
(b) 7237
(c) 0.0005521
(d) 5.403
(e) 5.79×10^{2}
(f) 7487×10^{-2}
(g) 0.000000006279
(h) 0.667

15.
Express each of the following as an "ordinary" decimal number.
(a) 6.403×10^{3}
(b) 5.719×10^{-5}
(c) 1.835×10^{4}

(d) 1.991 $\times 10^{-3}$
(e) 7.855 $\times 10^{-1}$
(f) 1.157 $\times 10^{1}$
(g) 9.593 $\times 10^{-4}$
(h) 2.037 $\times 10^{6}$
(i) 5.619 $\times 10^{-2}$
(j) 4.357 $\times 10^{-6}$
(k) 9.743 $\times 10^{3}$
(l) 3.000 $\times 10^{1}$

16.
Write each of the following numbers in standard scientific notation.
(a) 4347 $\times 10^{-4}$
(b) 98663 $\times 10^{4}$
(c) 78.35 $\times 10^{2}$
(d) 9.945 $\times 10^{-4}$
(e) 0.009945 $\times 10^{7}$
(f) 42131 $\times 10^{4}$
(g) 0.00008901 $\times 10^{6}$
(h) 0.00008901 $\times 10^{-6}$

17.
What are the names of the fundamental units of the following quantities in the metric system (SI)?
mass
distance
time

18.
Give the metric prefix that corresponds to each of the following.
(a) 10^{-9}
(b) 1,000,000
(c) 10^{-6}
(d) 0.001
(e) 10^{6}
(f) 10^{-2}

19.
The length 28.3 mm can also be expressed as
cm.

20.
Which metric system unit is most appropriate for measuring the distance between two cities?

21.
A dime is approximately 1 mm thick. What is the value in dollars of a stack of dimes that is 41 cm high?
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