Scientific Notation (continued)

MULTIPLYING AND DIVIDING IN SCIENTIFIC NOTATION

To multiply or divide numbers in scientific notation, we can change the order and grouping, so that we multiply or divide first the decimal parts and then the powers of 10. *For example*,

 $13.7 * 10^{-3}2 \cdot 12.5 * 10^{8}2$ = 13.7 * 2.52 \cdot 110^{-3} * 10^{8}2

= 9.25 * 10⁵.

Statistics

There are several ways to study a list of data.

Mean, or average, is the sum of all the data values divided by the number of values.

Median is the number that separates the list of data into two equal parts. To find the median, list the data in order from smallest to largest. If the number of data is odd, the median is the middle number. If the number of data is even, the median is the average of the two middle numbers.

Mode is the number in the list that occurs the most frequently. There can be more than one mode.

For example, consider the following list of test scores:

{87, 56, 69, 87, 93, 82}

To find the mean, first add: 87 + 56

Then divide by 6:

$$\frac{474}{6} = 79.$$

The mean score is 79.

To find the median, first list the data in order:

56, 69, 82, 87, 87, 93.

Since there is an even number of data, we take the average of 82 and 87:

$$\frac{82+87}{2}=\frac{169}{2}=84.5.$$

The median score is 84.5.

The mode is 87, since this number appears twice and each of the other numbers appears only once.

Distance Formula

Given the rate at which you are traveling and the length of time you will be traveling, the distance can be found by using the formula

 $d = \mathbf{r} \cdot \mathbf{t}$

where

d = distancer = ratet = time

Measurements

U.S. Measurement Units

in. = inch	oz = ounce
ft = foot	c = cup
min = minute	mi = mile
sec = second	hr = hour
gal = gallon	lb = pound
yd = yard	qt = quart
pt = pint	T = ton

Metric Units

	mm = millimeter	
	cm = centimeter	
	km = kilometer	
	m = meter	1
	mL = milliliter	11
	cL = centiliten	
	L = liter	
	Region ter	
10	mg = milligram	
	cg_= ent r m	
5		
5	kg = kilogram	

U.S. AND METRIC CONVERSIONS

U.S.

12 in. = 1 ft	3 ft = 1 yd
1760 yd = 1 mi	5280 ft = 1 mi
2 c = 1 pt	1 c = 8 oz
4 qt = 1 gal	2 pt = 1 qt
2000 lb = 1 T	16 oz = 1 lb

Metric

1000 mm = 1 m	100 cm = 1 m
1000 m = 1 km	100 cL = 1 L
1000 mL = 1 L	100 cg = 1 g
1000 mg = 1 g	1000 g = 1 kg
0.001 m = 1 mm	0.01 m = 1 cm
0.001 g = 1 mg	0.01 g = 1 cg
0.001 L = 1 mL	0.01 L = 1 cL