Scientific Quantities

Organizing your Data

All graphs need...

- ☐
- ☐
- ☐
- ☐

Paste back of graphs accordion foldable here

[Your Metric Prefixes Slider will rest here]

Paste the Metric Prefixes overlay here

The SI System

Quantity	Name	Symbol
Length		
Mass		
Time		
Electric Current		
Temperature		
Amount of matter		
Luminous Intensity		

Scientific Notation

Paste the scientific notation foldable here

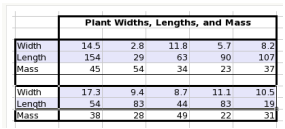
Really cool website - http://htwins.net/scale/

What is dimensional analysis?

Paste the back of the dimensional analysis flipbook here.

Data Tables

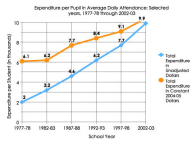
Should be organized so that...



Plant Widths, Lengths, and Mass					
Width	14.5	2.8	11.8	5.7	8.2
Length	154	29	63	90	107
Mass	45	54	34	23	37
Width	17.3	9.4	8.7	11.1	10.5
Length	54	83	44	83	19
Mass	38	28	49	22	31

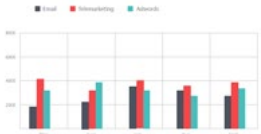
Line Graph

Best used for data that...



Bar graph

Best used for data that...



Pie graph

Best used for data that...

2.99×10^{8}

$$\frac{10\text{yds}}{1\text{min}} \rightarrow \frac{\text{ft}}{\text{min}}$$

$$\frac{\text{yds}}{\text{min}} \cdot \boxed{\frac{\text{ft}}{\text{yds}}} = \frac{\text{ft}}{\text{min}}$$

$$\frac{10\cancel{\text{yds}}}{1\text{min}} \cdot \frac{3\text{ft}}{1\cancel{\text{yd}}} = \frac{10 \cdot 3\text{ft}}{1\text{min}} = \frac{30\text{ft}}{1\text{min}}$$

Final Answer

$$\frac{10\text{yds}}{1\text{min}} \rightarrow \frac{\text{ft}}{\text{min}}$$

$$\frac{\text{yds}}{\text{min}} \cdot \boxed{\frac{\text{ft}}{\text{yds}}} = \frac{\text{ft}}{\text{min}}$$

Cancel Units

$$\frac{10\text{yds}}{1\text{min}} \rightarrow \frac{\text{ft}}{\text{min}}$$

Identify Conversions

Prefix	*Symbol*	*Meaning*
Kilo	K	10^3 (1,000)
hecto	h	10^2 (100)
deca	dK or D or da	10
---	*(m, g, L, s, C)*	*base*
Deci	D	10^{-1} (.1)
Centi	C	10^{-2} (.01)
Milli	M	10^{-3} (.001)

A process for changing the units of a measurement

Unit Conversions

Dimensional Analysis

6 inches of duct tape goes here

5280 feet =1 mile
0.034 ounces = 1 milliliter
0.454 kg = 1pound
1.6 kilometers = 1 mile
1.05 quarts =1 liter
4 quarts = 1 gallon

1)Convert 23 miles to feet.

Conversion factor needed: _____ = _____

Dimensional Analysis:

_____ / _____ =

2) Convert 120 lbs to kilograms.

Conversion factor needed: _____ = _____

Dimensional Analysis:

_____ / _____ =

3) 0.75 kg to milligrams

Conversion factors needed: _____ = _____ _____ = _____

Dimensional Analysis:

_____ / _____ / _____ =

4) Convert 65 ounces to liters.

Conversion factors needed: _____ = _____ _____ = _____

Dimensional Analysis:

_____ / _____ / _____ =