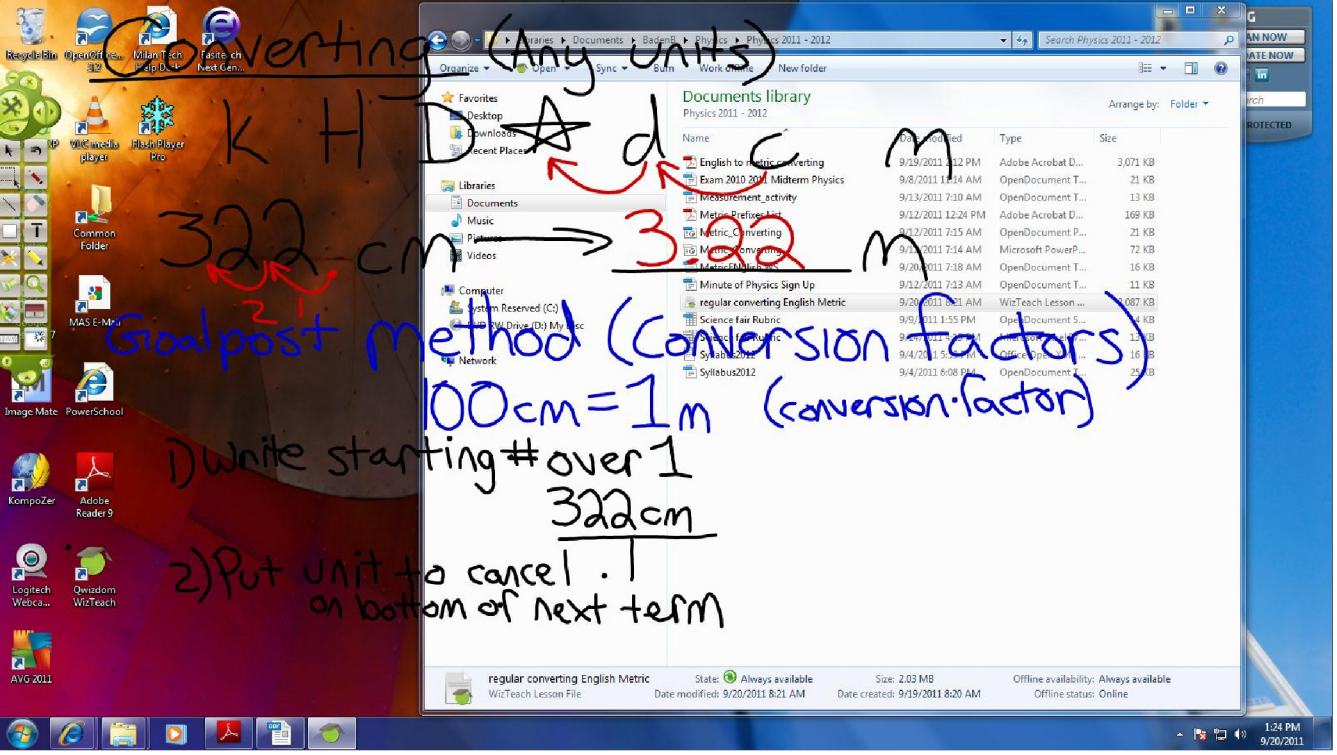
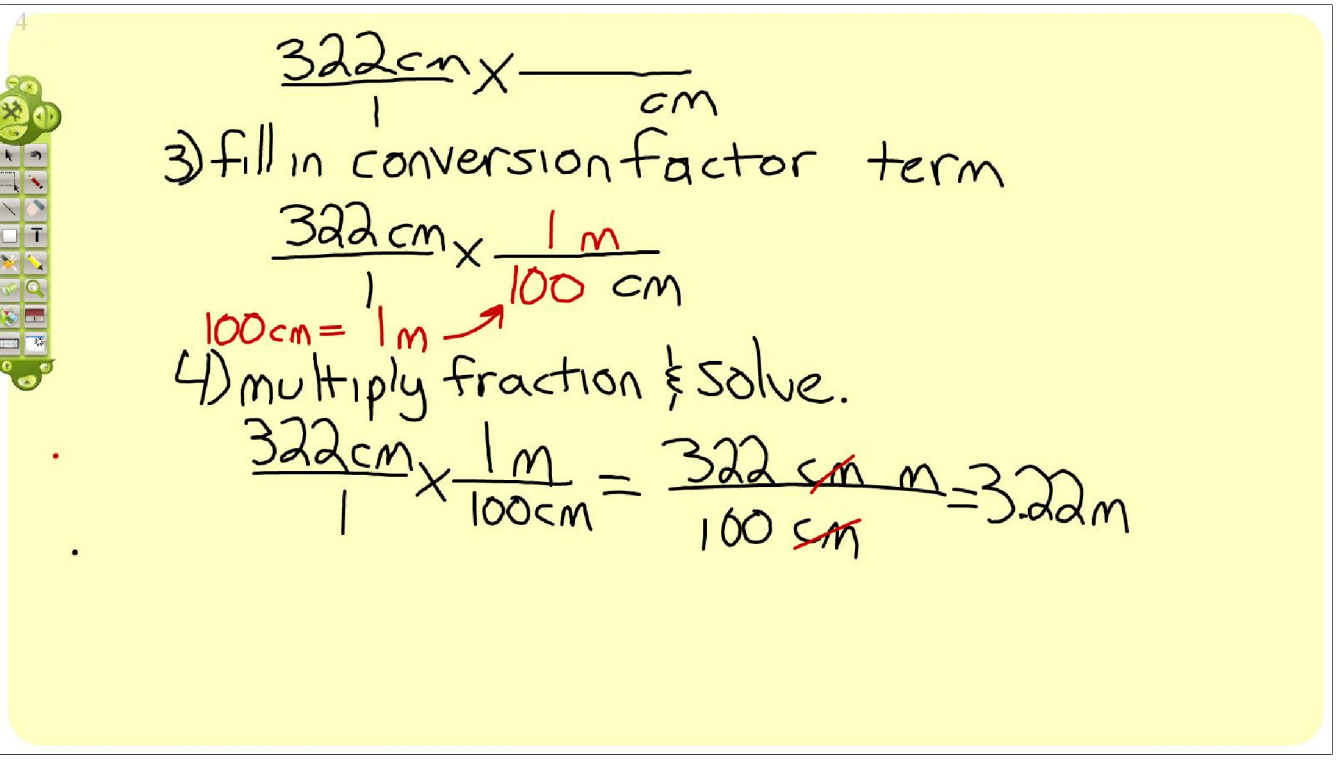
Purpose

1) Vectors (Path independent-displacement)
2) Convert
3) Graphical representations


Converting (Any units)
k H D d c m
322 cm → 3.22 m
2 1
Goalpost method (conversion factors)
100cm = 1m (conversion factor)
1) Write starting # over 1
322cm / 1
2) Put unit to cancel . | on bottom of next term


322cm / 1 x ____ / cm
3) fill in conversion factor term
322cm / 1 x 1m / 100cm
100cm = 1m
4) multiply fraction & solve.
322cm / 1 x 1m / 100cm = 322 cm m / 100 cm = 3.22m

5

$2.54\ cm = 1\ in$

$\frac{508\ cm}{1} \times \frac{1\ in}{2.54\ cm} = \frac{508}{2.54}\ in$ ~~cm~~ / ~~cm~~

$= 200\ in.$

$\frac{150\ in}{1} \times \frac{2.54\ cm}{1\ in} = \frac{381\ cm}{1}$ ~~in~~ / ~~in~~

6

$762\ cm = \underline{300}\ in$

$1052\ cm = \underline{414}\ in$

$400\ in = \underline{1016}\ cm$

$20\ in = \underline{50.8}\ cm$

$2.54cm = 1\ in$

1 fl oz = 29.575 mL
1 gal = 3.785 L

4.93 mL = 1 tsp

16 oz = 1 lb.

1 cup = 237 mL

1 in = 25.4 mm

Scientific Notation

A way to write really Big or really small numbers.

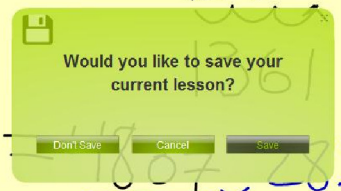
- Also makes the numbers easier to work with

ALWAYS a number then a decimal point then times 10 to some power.

$$\frac{3\ lbs}{1} \times \frac{1\ kg}{2.2046\ lbs} = \frac{3\ \cancel{lbs}\ kg}{2.2046\ \cancel{lbs}}$$

$1.361\ kg$

$$\frac{8\ \cancel{lbs}}{1} \times \frac{16\ oz}{1\ \cancel{lbs}} = \frac{128\ oz}{1} \times \frac{28.35\ g}{1\ oz} =$$



3) 5.5
4) 11.5
5) 12.5
6) 20

9) 7

12) 15.5
13) 25
14) 15

17) 1.5

20) 10.5