Dimensional Analysis is the process of using equalities (things that are equal) to create conversion factors (ratios) to multiple by in order to change the unit. It is very important for NOW and THE FUTURE that you are able to SET UP and SOLVE these problems.

Solve all problems below and SHOW ALL WORK!!!

## EQUALITIES

3 peaches $=2$ pears 4 pears $=1$ watermelon
2 watermelons $=7$ bananas 3 bananas $=2$ oranges
5 oranges $=1$ guava

1. How many oranges are in 17.0 bananas?
2. How many peaches are in 17.0 bananas?
3. How many watermelons are there in 13.572 peaches?
4. How many bananas are there in 7.43 guavas?
5. How many guavas are there in 20 peaches?
6. How many bananas are there in 6.5 oranges?
7. How many watermelons are there in 19 guava?

Check your Conversion Factor chart to convert the following problems.
8. How many pounds (lbs) in 12 ounces (oz).
9. How many inches in 398.7 mm ?
10. How many feet in $69,874 \mathrm{~cm}$ ?
11. Convert 454 grams to pounds?
12. How many cm in 12.1 inches?
13. 14.99 pounds is how many kilograms?
14. How many kilometers are in 56,978 miles?
15. How many quarts are there in $2,500 \mathrm{~mL}$ ?

