Name:_____ Period:_____

Dimensional Analysis Worksheet

Use dimensional analysis (the "factor-label" method) to solve the following problems. **Show all steps** needed to convert from starting units to ending units. Indicate all relationships needed before setting up and solving the problem. Use any of the following relationships if needed:

1 mile = 1760 yds	16 oz = 1 lb	1 L = 1.057 qts	1 day = 24 hours
1 yd = 3 ft	2000 lbs = 1 ton	4 qts = 1 gal	1 hour = 60 mins
1 ft = 12 in	1 oz = 28.35 g	32 oz = 1 qt	1 min = 60 secs
1 mile = 1.6093 km	1 kg = 2.205 lbs	1 qt = 2 pts	

1. A runner competed in a 5-mile run. How many yards did she run?

2. In the Tour de France, cyclists ride 3,653.6 km in 20 days. How many miles do they go? [Hint: watch for unimportant information!]

3. After a nice meal, perhaps you'd finish it off with a pound (1.00 lb) cake for dessert. What would the name of this cake be in grams?

4. In the US milk is sold by the gallon, while in Denmark it is sold by the liter. How many liters of milk would you need to equal one gallon?

5. If you go to school for 180 days each school year and each school day is 7 hours long, how many hours are spent in school in one school year?

Dimensional Analysis Worksheet

Every three times I clean my bedroom, my mother makes me an apple pie. I cleaned my bedroom 9 times. How many apple pies does she owe me?

You're throwing a pizza party for 15 people and figure that each person will eat 4 slices. You call up the pizza place and learn that each pizza will cost you $14.78 and it will be cut into 12 slices. How much is the pizza going to cost you? You only have $70. Will you have enough money?

In my chemistry class, 28 students are each given 3 pens. If there are 8 pens in one package, priced at $1.88 per package, what is the total cost of giving away pens?

You find 13,406,190 pennies. A) How many dollars did you actually find? B) If each penny weighs 4 grams, how much did all that loot weigh in lbs.? (2.2 lbs = 1 Kilogram) C) Assume a movie ticket costs $9, how many movie tickets could you buy with the pennies?