

Stops Working When...



Your Instructor Says The Words  
"Dimensional Analysis"

We will watch the video TWICE! The first time, just watch the video, the second, work through the problems below

<https://www.youtube.com/watch?v=7NOIRJLwpPI>

What is 3.45 pounds expressed in grams?

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How many miles is 15,100 feet?

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On a certain day, the exchange rate between US Dollars and Euros is  $1 \text{ USD} = 0.78 \text{ EUR}$ .  
On that day, how much is 125 Euros worth in US Dollars?

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## DIMENSIONAL ANALYSIS PROBLEMS

### Conversions Factors

1 hr = 60 min	1 min = 60 sec	1 ton = 2000 lbs	7 days = 1 week
24 hrs = 1 day	1 kg = 2.2 lbs	1 gal = 3.79 L	264.2 gal = 1 cubic meter
1 mi = 5,280 ft	1 kg = 1000 g	1 lb = 16 oz	20 drops = 1 mL
365 days = 1 yr	52 weeks = 1 yr	2.54 cm = 1 in	1 L = 1000 mL
0.621 mi = 1.00 km	1 yd = 36 inches	12 inches = 1 foot	1 mL = 1 cm <sup>3</sup>

You must show all work

1. Suppose a bug is 5 inches long. What is its length in feet?
2. You just had 5 days off from school. How many hours did you have off from school?
3. Denver and Los Angeles are 830 miles apart. What is this distance in kilometers?
4. The moon is 250,000 miles away. How many feet is it from earth?
5. A family pool holds 10,000 gallons of water. How many cubic meters is this?
6. Write your own problem and solve!!