

Name -
Date -
Period -

Conversions and Estimations
SHOW ALL WORK!!!

A household faucet produces $2.5 \frac{\text{gallons}}{\text{minute}}$ but you want to fill a kiddie pool that is 200 Liters. How do you know how long you can leave the hose running without wasting water?

This is just a conversion problem! First convert 200 Liters to _____ gallons (3.8 Liters = 1 gallon)

Now $2.5 \frac{\text{gallons}}{\text{minute}}$ multiplied by _____ minutes = _____ gallons (answer from last step)

Write out the problem in factor cancellation method, keeping units with numbers as you do the algebra.

Units should be minutes... so what happened to quotients when they were in another quotient? (hint: you probably divided gallons by gallons/minute...)

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You have been training and so can run a mile in 6.5 minutes. How long would it take you to run a lap around the outside track, which is 400m? 1 mile = 5280 feet, 1 meter = 3.3 ft

A hallway measures 15 tiles across and 100 long. If each tile is 1 ft x 1 ft then what is the area of the hallway in meters? 1 meter = 3.3 ft, $m^2 = ? ft^2$

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You are making raised beds for a productive vegetable garden and have 4 boxes that are 1 m x 2 m x 1 m deep. What volume of dirt (in cubic meters) will you need? How many cubic feet is that?

If each cubic meter weighs 1500 kg, how many kgs will you need? How many pounds is that?

Estimate the speed of your hair growth. Think about how often you cut your hair and how much you cut off. Give your answer in meters per second. Is this a reasonable unit? If not, then what is?

Trees actually grow faster as they get bigger, so they absorb more carbon as they get older. However, we can assume a tree sequesters (stores away) 40 lbs of carbon a year. What mass of wood in kg would you need to burn in a bonfire to return the carbon of a 20 year old tree to the environment if wood is made of 50% carbon?