

Dimensional Analysis Problems
<http://www.alyson.org/dimensional/fun.htm>

1)

Your car's gas tank holds 18.6 gallons and is one quarter full. Your car gets 16 miles/gal. You see a sign saying, "Next gas 73 miles." Your often-wrong brother, who is driving, is sure you'll make it without running out of gas. You're not so sure and do some quick figuring:

2)

You're throwing a pizza party for 15 and figure each person might eat 4 slices. How much is the pizza going to cost you? You call up the pizza place and learn that each pizza will cost you \$14.78 and will be cut into 12 slices. You tell them you'll call back. Do you have enough money? Here's how you figure it out, step by step.

3)

At the pizza party you and two friends decide to go to Mexico City from El Paso, TX where y'all live. You volunteer your car if everyone chips in for gas. Someone asks how much the gas will cost per person on a round trip. Your first step is to call your smarter brother to see if he'll figure it out for you. Naturally he's too busy to bother, but he does tell you that it is 2015 km to Mexico City, there's 11 cents to the peso, and gas costs 5.8 pesos per liter in Mexico. You know your car gets 21 miles to the gallon, but we still don't have a clue as to how much the trip is going to cost (in dollars) each person in gas (\$/person).