

Math 1030 #4a

Solving Problems with Units

US vs Metric Units

What quantities do we measure and what units do we use?

	Customary units	Metric system
length & distance		
volume		
weight (mass)		

Here are a few commonly used conversions between Metric and USCS measurements:

$$\begin{aligned} 1\text{in} &\approx 2.540\text{ cm} & 1\text{oz} &\approx 28.3495\text{ g} & 1\text{qt} &\approx 0.9464\text{ liter} \\ 1\text{yd} &\approx 0.9144\text{ m} & 1\text{lb} &\approx 0.4536\text{ kg} & & \\ 1\text{mi} &\approx 1.6093\text{ km} & & & & \end{aligned}$$

EX 1:

- How many liters are in a 6 -pack of 12 -oz cans of pop?
- If you go 100 km/hr in your Porsche, what is the speed in mph?
- If water sells for \$2.00 per quart and soda sells for \$0.99 per 2-liter bottle, how much more expensive is water?

