

Unit 1

1.1 Proportional Reasoning

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Objective

use ratios to solve new problems

Defintions

ratio: two numbers that have the same units are compared to each other

proportion: a fraction that describes the equality between two ratios or rates.

Start

Intro

Ratios are an integral part of our world, and you probably already use them everyday!

Driving

Q: What does it mean to be going 100 km an hour? What does this represent.

Q:What does going 30 km an hour in a school zone mean?

What we're really saying is this: for every hour (bottom) we have, we go 100 kilometers (top)

$$\frac{100kilometers}{1hour}$$

Since 1 hour = 60 minutes, we could simplify this further

$$\frac{100kilometers}{60minutes}$$

Can anyone tell me what

$$\frac{100}{60}$$

simplifies to?

thats right:

$$\frac{10}{6}$$

and this is how:

$$\frac{\frac{100}{10}}{\frac{60}{10}}$$

Q: is this exactly the same equation that we started out with? (why or why not?)

What does this simplified equation tell us?

We are comparing two things that normally can't work with each other.

Time and distance don't usually talk to each other. Think of ratios and rates as the interpreter, that little line between then, that allows them to talk to each other.

Example

Boys to girls in the room

Project 1

So here's your first project:

Your mission, should you choose to accept it, is to find out how much money you need to spend to eat everything that you do.

Don't worry if you can't do this right now, I am going to provide tools necessary for you to do this task.

Due September 19

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