

Proportions 11.30

Hand back assessments

Example 1:

Paul walks 2 miles in 25 minutes. How many miles can Paul walk in 137.5 minutes

Time (in minutes)	Distance(in miles)
25	2
50	4
75	6
100	8
125	10
150	12

Students fill out right side of table. Then answer the question where does 137.5 minutes fall? So our answer should be between what distances?

Set up the proportion $\frac{25}{2} = \frac{137.5}{y}$ Talk about units. Units need to be consistent in numerator and denominator.

Solve proportion for y. $y=11$.

Let's create an equation to solve the number of miles, y Paul walks in x minutes.

$\frac{25}{2} = \frac{x}{y}$ How do we get y by itself? What does the equation look like? $y = \frac{2}{25}x$. This equation lets us solve all types of questions about miles and minutes.

Use the table to determine where the $\frac{2}{25}$ comes from. It is the differences in the time and distance.

Example 2: Lets try this again with another table.

Time (in hours)	Distance (in miles)
3	123
6	246
9	369
12	492
x	y

Create the equation. Start with the proportion and get y by itself

$$\frac{123}{3} = \frac{y}{x} \text{ becomes } y = 41x$$

Practice do exercise 1 in MOD 4 Lesson 10 The go over this

David lives 15 miles away from Albany. He drives a constant 50 miles per hour away from his house and city. Let us consider distance in miles y and hours x. How far is david from Albany after x hours of driving?

David's average speed can be modeled by $\frac{y-15}{x}$. and we know $\frac{y-15}{x} = 50$. Can we solve this for y? Yes. $y=50x + 15$.

Homework exercies 2 and 3 in mod 4 lesson 10.