1. A computer programmer determines how much to charge based on the lines of code written. Is this situation proportional?

Lines of code	50	100	150	200
Cost ($)	1000	2000	3000	4000

Based on the table, how much does this programmer charge per line of code?

This unit rate is also called the constant of proportionality because it is the rate of change for a proportional situation.

For each problem below, find the rate of change and determine if the relationship is proportional or not. Make sure to show your work. ☺

2. John is participating in a walk-a-thon and each sponsor pledges $5 plus $1.50 per mile walked.
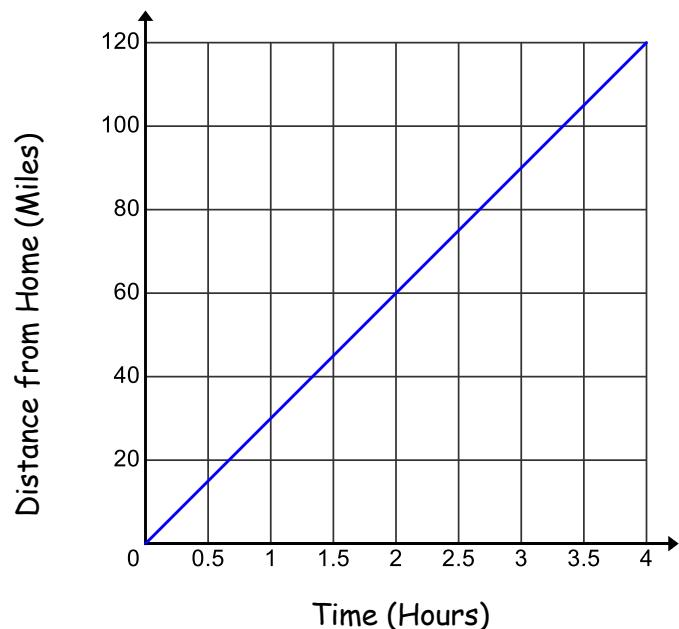Rate of change:
Proportional? Yes/no

3. A booster club was washing cars for a fundraiser and they recorded the amount of money they had received and the number of cars washed every time they had a break. How much did they charge to wash each car?

| Number of Cars washed	Money ($)
15	$112.50
22	$165
30	$225
37	$277.50

Rate of change:
Proportional? Yes/no

4. Bill gave you a graph showing how far he was from home.
How fast was he traveling?

Rate of change:

Proportional? Yes/no

5. Julie created a graph showing how much money she had in her savings account. How much was she saving each month?
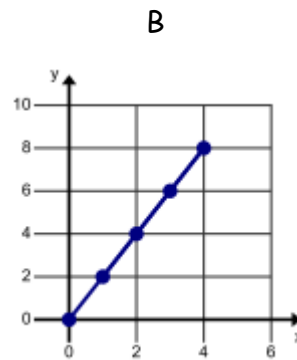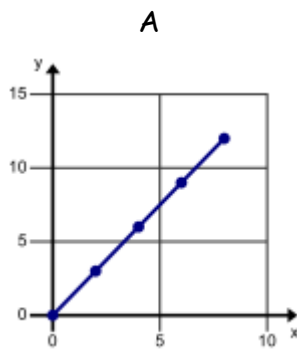
Rate of change:

Proportional? Yes/no

Money in Savings

Time in Months
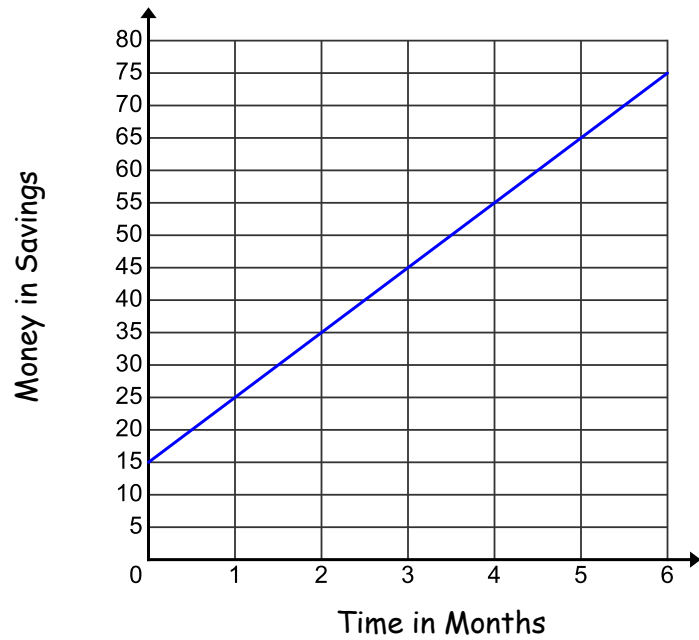
6. Which of these situations has a higher rate of change?

Explain how you know.

A

B

7. Is the rate of change always the same as the unit rate?   Explain.

8. How do you find the rate of change from a table?

9. How do you find the rate of change from a graph?