

Name _____

Date _____ Pd. _____

Notes: Functions and Rate of Change

Example 1: The table below shows the relationship between the number of cars students wash, x , and their profit, y , in dollars.

x	10	20	30	40	50
y	25	55	85	115	145

Look at constant difference between x -terms and y -terms. What relationship does the pattern between x and y suggest?

Questions: How much do the students charge for each car they wash?

How is this rate of change evident in the table and in the equation representing this relationship?

Equation is _____

Example 2: The table below shows the relationship between the number of tablespoons of sugar, x , and the number of cups of oats, y , in a breakfast cereal.

x	3	6	9	12	15
y	5	10	15	20	25

What is the constant differences between the x - and y -terms?

What is the ratio of the difference in the y -values to the difference in the x - values?

How many cups of oats for each tablespoon of sugar are used in this cereal?

Rate of Change	
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Exit Card: Functions and Rate of Change

The table below shows a relationship between x and y .

x	y
1	1
2	4
3	9
4	16

Complete the following

- What are the values of y when x is 10 and x is 11?
- What is the relationship between the x -values and the y -values? Use mathematics to explain the relationship. Use words, symbols, or both in your explanation.
- Fill in the boxes to the right of the table _____ by finding the difference between the y -values of each of the successive terms. Describe the pattern that exists between the differences that you found.

x	y	Difference in y -values
1	1	<input type="text"/>
2	4	<input type="text"/>
3	9	<input type="text"/>
4	16	<input type="text"/>

- What is the difference between the y -values when x is 10 and when x is 11? Use mathematics to explain how you determined your answer. Use words, symbols, or both in your explanation.