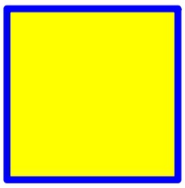
Take this brief survey:

http://tinyurl.com/SCMStrip



DHW Check 2-3:

Box 1: Finding Slope from a graph #5

Box 2: Finding Slope from a graph #16

Rate of Change (Slope) from Tables

Rate of Change: Another name for slope.

Remember to find the slope between 2 points, use the formula:

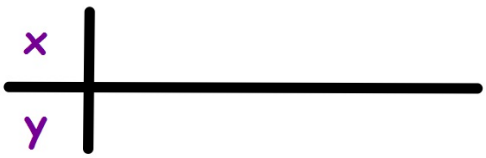
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

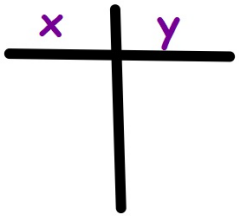
Rate of Change (slope) From a Table ~ Things to Know:

1) The information given in the independent set of your table will always represent the x -values (will not always be labeled x).

2) The information given in the dependent set of your table will always represent the y -values (will not always be labeled y).

Examples:





Steps to finding slope from a table:

1) Choose any 2 points from the table.

2) Use these 2 points and label them $(x_1, y_1), (x_2, y_2)$

3) Use the formula for finding slope of 2 points and plug your points into it.

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

**Or your can:

-find change in y over change in x

-Graph and Count

-Stack, Subtract, Write Back

- hoopties

4) Always check to make sure the slope is true for the ENTIRE table!

Example 1:

Cost of Renting a Computer	
Number of Days	Rental Charge
1	$60
2	$75
3	$90
4	$105
5	$120

Change in y: Δ 120-75 = 45 = \$15

Change in x: Δ 5-2 = 3

\$15 per day

Find the rate of change using Days 5 and 2.

$(2, 75), (5, 120)$

$x_1 \ y_1 \quad x_2 \ y_2$

Example 2:

Grace Adler is going scuba diving. At t=0 seconds, she is at a depth of 6 feet below the surface. At time t=15 seconds, Grace is at a depth of 20 feet. What is Grace's average rate of change in depth?

$(0, -6)$, $(15, -20)$
$x_1 \ y_1$ $x_2 \ y_2$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-20 - (-6)}{15 - 0} = \frac{-20 + 6}{15} = \frac{-14}{15}$$

Grace's rate of change is $\frac{-14}{15}$ feet per second.

Try These!

Example 3:

x	y
1	0
2	-1
3	-2
4	-3

Change in y: $\frac{\Delta}{\Delta} \frac{-2-0}{3-1} = \frac{-2}{2} = -1$

Change in x:

$(1,0), (3,-2)$
$x_1\ y_1 \quad x_2\ y_2$

Example 4: hoopties

x	y	
1	1	
3	5	+4
5	9	+4
7	13	+4
+2	+2	+2

Change in y: $\frac{\Delta}{\Delta} \frac{4}{2} = 2$

Change in x:

Example 5:

Find the rate of change:

x	y
1	5
2	7
3	9
4	11

+1 +2 +1 +2 +1 +2

Change in y: $\Delta 2 = 2$

Change in x: $\Delta 1$

HW: Finding Slope from a Table WS