

Name: _____

Class/Block: _____ Date: _____

Exploration: Slope & Scale

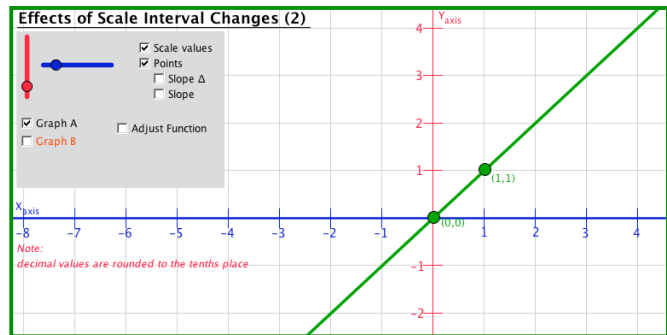
Part I: Examine Effects of Scale

1. Launch the *Effects of Scale Interval Changes (2)* applet

2. Check the following checkboxes

- *Graph A*

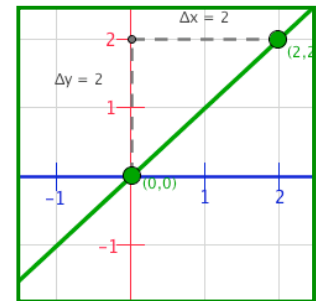
- *Points*



3. Move the points along the line. Notice the coordinates.

Next click on the slope triangle. Notice the Δy and Δx values.

a) What is the relationship between the Δy and Δx values?



b) Click on the *Slope* checkbox to see the slope.

$$\text{slope}_{\text{graphA}} = \frac{\Delta y}{\Delta x} = \frac{2}{2} = 1$$

c) Move the point located at (2,2). What happens to the value of the slope?

d) Move the blue slider to “stretch” and “squeeze” the x-axis. What happens to the slope?

e) Move the red slider to “stretch” and “squeeze” the y-axis. What happens to the slope?

f) Notice the line as you move the sliders. Explain how the graph of the line looks as the sliders are moved.

You can click on the *Adjust function* checkbox to change the function. The top slider changes the slope and the bottom slider changes where the line crosses the y-axis (called y intercept.)

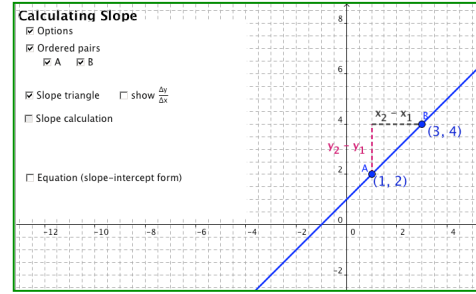
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Part II. Examine Slope

Launch the *Calculating Slope* applet

- Check the following checkboxes
 - **Options**
 - **Ordered pairs (A&B)**
 - **Slope Triangle**
 - **Slope Calculation**



- Look at the graphs below and determine the slope. (Make sure to look at the x- and y-axis scales.)
 - Write the ordered pairs on the graph for points A and B, draw your slope triangle, and find the slope. Show the ordered pairs and your work in the right column.
 - Go to the applet. Move the points A and B to match the points on your graph. Check the slope.

<i>Graph</i>	<i>Determine the slope</i>
<p>1.</p>	<p>A = () B = ()</p>
<p>2.</p>	<p>A = () B = ()</p>
<p>3.</p>	<p>A = () B = ()</p>

