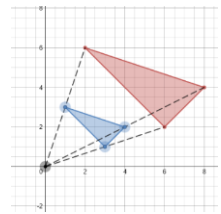




Desmos 101: Geometry
Charge Up! With Desmos (Beginners)
Session: T-048b (9:35am)



ACTIVITY 1: SLIDERS

Graph the following line: $y = 4x - 3$

- 1) Create a SLIDER for $y = mx + b$.
 - i. Type: $y = mx + b$ (no spaces) into entry box
 - ii. Click “m” and “b” that appears to input slides
 - iii. “PLAY” button allows the sliders to toggle back and forth; moving the slider manually allows you to adjust the location.

*Adjust the values for the slope and y-intercept to generate a line that is parallel to the given line: $y = 4x + 3$

*Use the ZOOM features (+ or -) or SCREEN GRAB feature to adjust the view of the graph to verify the lines are parallel. Make adjustments as needed.

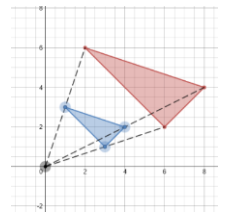
- 2) Record the equation of the line in slope intercept form:

- 3) What is the relationship between the slopes of each line?

- 4) What is the relationship between the y-intercepts of each line?



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Graph the following line: $y = \frac{1}{4}x$

- 1) Create a SLIDER for $y = mx$.
 - a. Type: $y = mx$ into entry box
 - b. Click “m” that appears to input slides
 - c. “PLAY” button allows the sliders to toggle back and forth; moving the slider manually allows you to adjust the location.

*Use the PROTRACTOR feature to assist in approximating a line that is perpendicular to the given line: $y = \frac{1}{4}x$.

*Adjust the value for the slope to generate a line that is perpendicular to the given line:
 $y = \frac{1}{4}x$.

- 2) Represent the slope of the perpendicular line as a fraction, in simplest form:

- 3) Record the equation of the line in slope intercept form:

- 4) What is the relationship between the slopes of each line?