

Blueprint Equation of a Non-Vertical Line (Investigation)

Go to <http://tube.geogebra.org/material/simple/id/3241319>. You can also go to tube.geogebra.org, and then enter **3241319** in the *Search Materials* bar.

Use this applet to help you complete (fill in) the following chart below:

Line Passes Through These Points	Slope of Line	Where Line Crosses Y-Axis	Equation of Line
(0, 5) and (4, 1)			
(0, -4) and (6, 3)			
(5, 1) and (0, 4)			
(-4, -1) and (0, -3)			
(0, 4) and (2, 0)			
(0, 3) and (8, 3)			
(-5, 5) and (0, -1)			
(0, 0) and (2, 2)			
(0, 7) and (-2, 5)			

Line Passes Through These Points	Slope of Line	Where Line Crosses Y-Axis	Equation of Line
(-3, -4) and (0, -6)			
(4, -5) and (0, 6)			
(0, 6) and (-5, -1)			
(2, 8) and (0, 0)			
(0, -5) and (-2, -1)			
(6, -3) and (0, 1)			
(0, -2) and (2, 0)			
(0, 5) and (5, 0)			
(-5, 0) and (0, -2)			
(-3, -3) and (0, 4)			

Key Question:

Do you notice any patterns in each row? That is, do you notice any relationship among the **equation of a line**, the **slope of that line**, and **the point at which that line crosses the y-axis**? *Explain, in great detail, as best you can.*