



Comparing y-intercepts, x-intercepts, and slopes in linear functions

Date: 1/7-8

Essential Question:

Questions:

Notes: For each representation, find the slope, y-intercept, and x-intercept. Then, compare them.

x	-1	3	5	8	11
f(x)	4	-4	-8	-14	-20

$\frac{\Delta y}{\Delta x}$

1) Slope - Pick 2 #s, calculate  $\frac{\text{rise}}{\text{run}}$   
 $*5 \leftarrow (3, -4) \rightarrow -10$   $\frac{\text{rise}}{\text{run}} = \frac{-10}{5} = -2$  slope

2) yintercept (x=0)

$y = mx + b$

Use the slope + a point to find the y-int.

$-4 = (-2)(3) + b$

slope = -2, (3, -4)

$-4 = -6 + b$

$+6 \quad +6$

$2 = b \rightarrow y = -2x + 2$

3) x-intercept (y=0)

Plug 0 in for y and solve for x

$0 = -2x + 2$

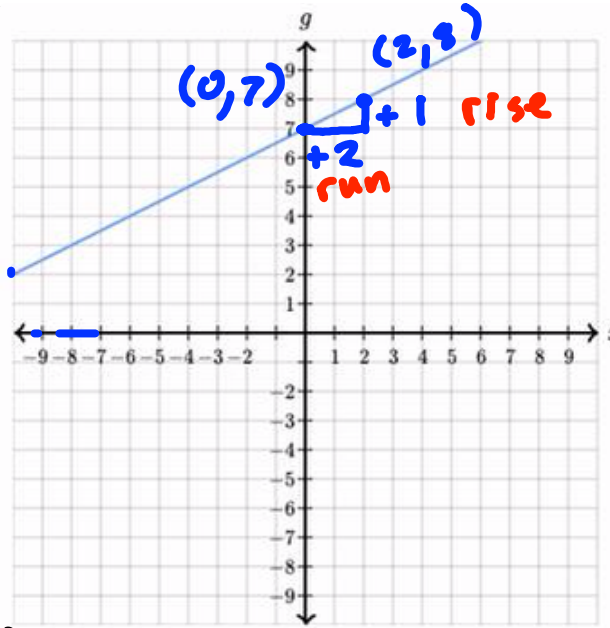
$\frac{-2}{-2} = \frac{-2}{-2}$

$1 = x$

Summary:

Questions:

Notes:



1) Slope: Use right triangle to find rise & run.

★ Pick nice pts.

$$\frac{\text{rise}}{\text{run}} = \frac{1}{2}$$

2) y-intercept at 7 (on the graph)

$$y = \frac{1}{2}x + 7$$

3) x-intercept (y=0)

$$0 = \frac{1}{2}x + 7$$

$$-7 = \frac{1}{2}x$$

$$-14 = x$$

$$h(x) = 1x - 11$$

slope: 1

y-int: -11

$$3) 0 = x - 11$$

$$11 = x$$

$$11 = x$$

largest slope: Equation (but the table is steepest)

largest y-intercept: Graph

rightmost x-intercept: Equation

Summary: