Lines: Lesson 3

Advanced Slope: Worksheet 1

Name: Answers

MATH ALL

Find the slope and equation of the line between these points:

(-40, 7) (-40, 17)

slope: $\frac{17-7}{-40-(-40)} = \frac{10}{0}$ = undefined

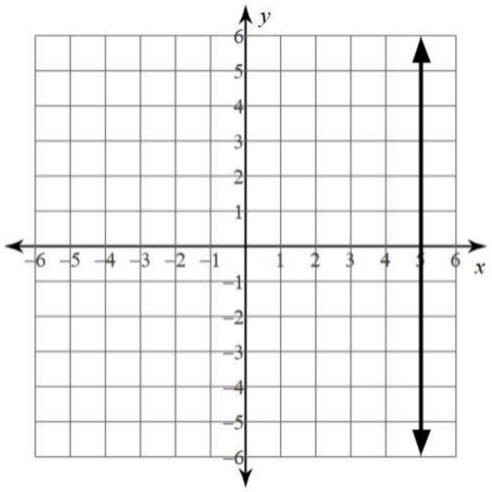
equation: $x = -40$

(1, 8) (-36, 8)

slope: $\frac{8-8}{-36-1} = \frac{0}{-37} = 0$

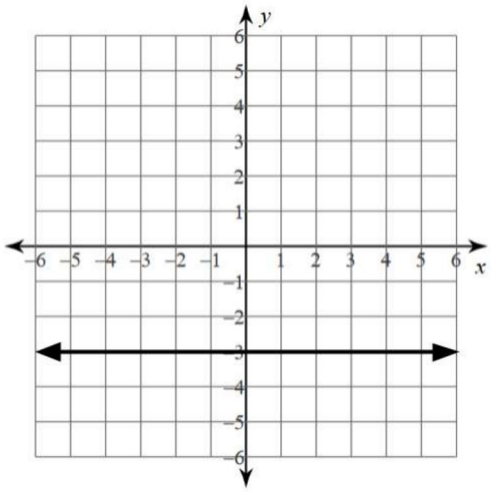
equation: $y = 8$

Find the slope and equation of these lines:



slope: undefined

equation: $x = 5$



slope: 0

equation: $y = -3$

Are these 3 points on the same line?

(-4, 6) (0, 10) (4, 12)

slope btw 1 & 2: $\frac{10-6}{0-(-4)} = \frac{4}{4} = 1$

btw 2 & 3: $\frac{12-10}{4-0} = \frac{2}{4} = \frac{1}{2}$

no!

(6, -5) (-2, 1) (-6, 4)

1 & 2: $\frac{1-(-5)}{-2-6} = \frac{6}{-8} = -\frac{3}{4}$

2 & 3: $\frac{4-1}{-6-(-2)} = \frac{3}{-4} = -\frac{3}{4}$

yes!

Find a.

$(-7, -4)$ $(6, a)$ slope: $\frac{-1}{4}$

$$\frac{a-(-4)}{6-(-7)} = \frac{-1}{4}$$

$$\frac{(a+4)}{13} = \frac{-1}{4}$$

$$4(a+4) = -13$$

$$4a + 16 = -13$$

$$4a = -29$$

$$a = -\frac{29}{4}$$

$(3, -4)$ $(a, 5)$ slope: -1

$$\frac{5-(-4)}{a-3} = \frac{-1}{1}$$

$$\frac{9}{a-3} = \frac{-1}{1}$$

$$-1(a-3) = 9$$

$$-a + 3 = 9$$

$$-a = 6$$

$$a = -6$$