

Warm Up

10/3

If the x values in a data table increase by different amounts, how can we decide if the relationship is linear or not?

	x	y	
+3	4	20	> -6
+4	7	14	> -8
+6	11	6	> -12
	17	-6	

$\frac{\Delta y}{\Delta x} = \frac{-6}{3} = -2$ ✓
 $\frac{\Delta y}{\Delta x} = \frac{-8}{4} = -2$ ✓
 $\frac{\Delta y}{\Delta x} = \frac{-12}{6} = -2$

Linear

If linear, write the equation!

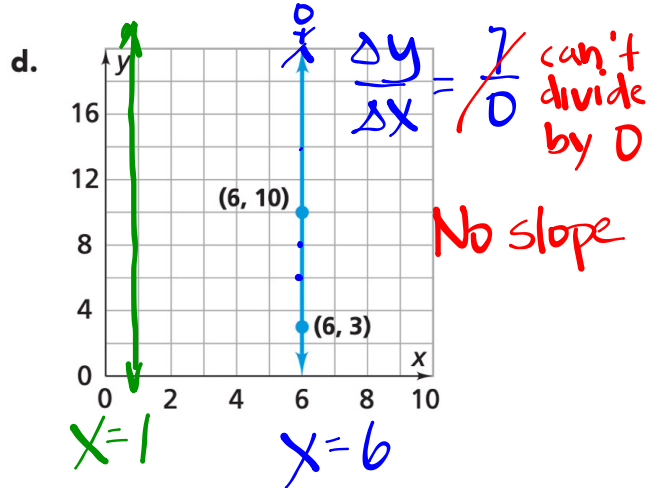
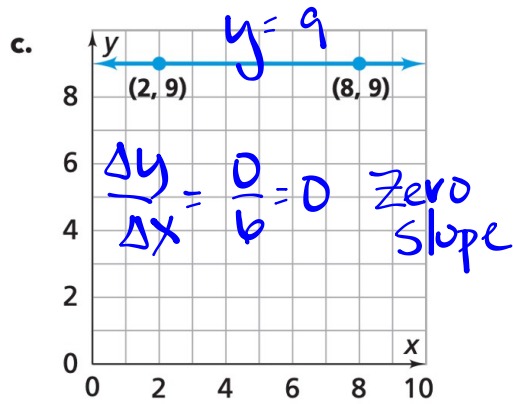
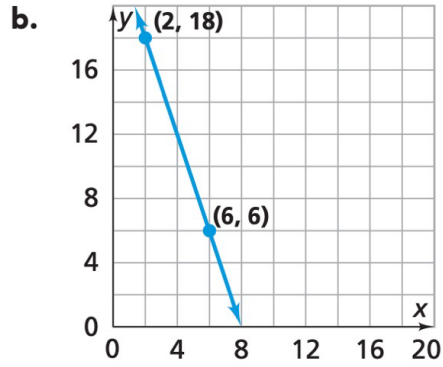
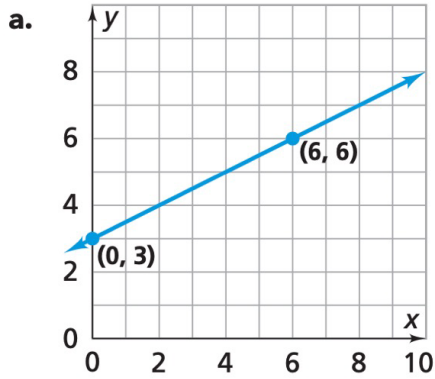
$(4, 20)$ $y = -2x + b$
 $20 = -2(4) + b$
 $20 = -8 + b$
 $\begin{array}{r} +8 \quad +8 \\ \hline 28 = b \end{array}$
 $y = -2x + 28$

$(11, 6)$
 $b = -2(11) + b$
 $b = -22 + b$
 $\begin{array}{r} +22 \quad +22 \\ \hline 28 = b \end{array}$
 $y = -2x + 28$

Homework Questions?

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8. Find the slope, y-intercept, and equation of each line.



$y = 0x + b$

$y = 9$

For Exercises 14–19, find an equation for the line that satisfies the conditions.

14. slope 4.2; y-intercept (0, 3.4)

15. slope $\frac{2}{3}$; y-intercept (0, 5)

16. slope 2; passing through (4, 12)

17. passing through (0, 15) and (5, 3)

18. passing through (-2, 2) and (5, -4)

} you got a gift!

← y-int

Writing Equations of Lines Practice

Write the slope-intercept form of the equation of the line through the given point with the given slope.

1) through: $(3, 2)$, slope = -1

2) through: $(-1, 0)$, slope = 2

3) through: $(-5, 4)$, slope = $-\frac{8}{5}$

4) through: $(3, -1)$, slope = -2

Write the slope-intercept form of the equation of the line through the given points.

5) through: $(-2, 5)$ and $(-1, -4)$

6) through: $(0, -5)$ and $(-3, -4)$

7) through: $(0, 0)$ and $(3, -4)$

8) through: $(2, -3)$ and $(0, 2)$

Homework

Finish classwork