

Name: Ansv

Review Slope

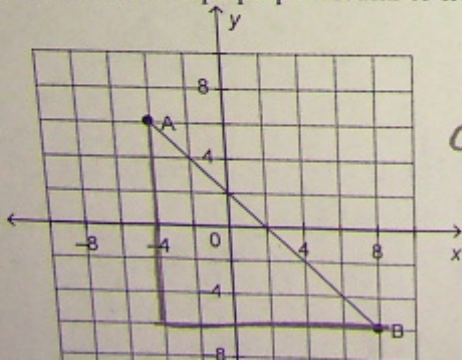
1. Write an equation (**slope intercept form**) for the graph of a linear function that has slope 8 and y-intercept of 7.

$$y = 8x + 7$$

2. Write the equation(**slope intercept form**) of a line with a y-intercept of -4 and a slope of $\frac{4}{3}$.

$$y = \frac{4}{3}x - 4$$

3. a) Determine the slope of this line segment.
b) What is the slope perpendicular to it?



$$a) \frac{-6}{6} = \frac{-1}{1}$$

$$b) \text{ Perp. } \frac{+1}{1}$$

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ough (x_1, y_1) and (x_2, y_2) and $(6, 16)$.

$$4. m = \frac{y_2 - y_1}{x_2 - x_1}$$

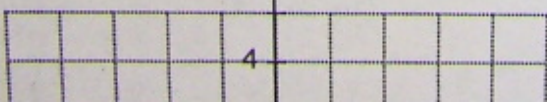
$$m = \frac{16 - (-8)}{6 - (-11)}$$

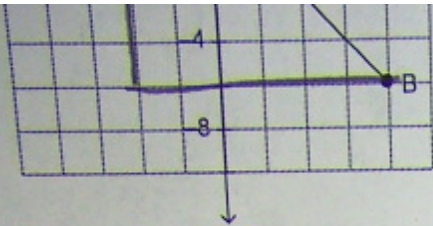
$$m = \frac{16 + 8}{6 + 11}$$

$$m = \frac{24}{17}$$

Are the two lines parallel, perpendicular, or neither?

Are the two lines parallel, perpendicular, or neither?





4. Determine the slope of the line that passes through $(-11, -8)$ and $(6, 16)$.

x_1, y_1 x_2, y_2

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{16 - (-8)}{6 - (-11)}$$

$$m = \frac{24}{17}$$

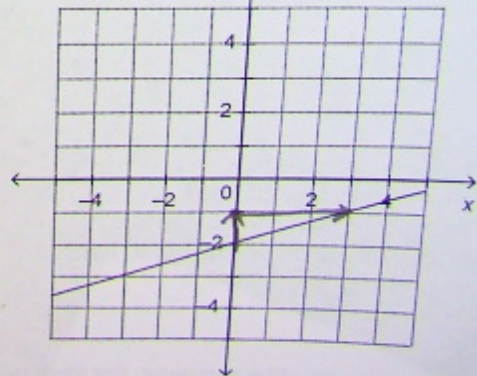
5. The slopes of two lines are $\frac{6}{11}$ and $\frac{6}{11}$. Are the two lines parallel, perpendicular, or neither?

6. The slopes of two lines are -2 and $\frac{1}{2}$. Are the two lines perpendicular, parallel, or neither?

7. Slope: $\frac{1}{3}$

~~x-int~~ Point: 2

Equation $y = \frac{1}{3}x + 2$



8. Complete the chart:

8. i) $4(x-9) = 3(y+3)$

$$4x - 36 = 3y + 9$$

$$3y + 9 = 4x - 36 - 9 \quad \text{Slope} = \frac{4}{3}$$

$$\frac{3y}{3} = \frac{4x}{3} - \frac{45}{3}$$

$$y\text{-int} = -15$$

$$y = \frac{4}{3}x - 15$$

ii) $\frac{2}{3}x + 6 = 7y$

$$7y = \frac{2}{3}x + 6$$

$$\frac{21y}{21} = \frac{2x}{21} + \frac{18}{21} \cdot 3$$

$$m = \frac{2}{21}$$

$$y = \frac{2x}{21} + \frac{6}{7}$$

$$b = \frac{6}{7}$$

$$\frac{dy}{dx} = \frac{2x}{21} + \frac{6}{21}$$
$$y = \frac{2x}{21} + \frac{6}{7} \quad b = \frac{6}{7}$$

iii)

$$5(z-y) = 10x - 30$$
$$\textcircled{10} - 5y = 10x - 30 - 10$$
$$\frac{-5y}{-5} = \frac{10x - 40}{-5}$$
$$y = -2x + 8$$

Slope = -2
y-int = 8

9. Find the value of K. x_1, y_1 x_2, y_2
 $(-3, K)$ and $(2, 10)$. $M = 17/6$

$$\frac{17}{6} = \frac{10 - K}{2 - (-3)}$$

$$\frac{17}{6} = \frac{10 - K}{5}$$

$$6(10 - K) = 85$$

$$60 - 6K = 85 - 60$$

$$-6K = 25 - 60$$

$$K = \frac{25}{-6}$$

10. Determine the slope of the line of this equation: $9x + 5y - 13 = 0$ ($y = mx + b$)

$$9x + 5y - 13 = 0 \rightarrow -9x + 13$$

$$\frac{5y}{5} = \frac{-9x + 13}{5}$$

$$y = \left(-\frac{9}{5}\right)x + \frac{13}{5}$$

$$m = -\frac{9}{5}$$

11. a) Determine the slope and y-intercepts of this equation: $5x + 8y + 40 = 0$ ($y = mx + b$)

$$5x + 8y + 40 = 0$$

$$\frac{8y}{8} = \frac{-5x - 40}{8}$$

$$y = -\frac{5}{8}x - 5$$

$$m = -\frac{5}{8}$$

$$b = -5$$

Problem

$$y = \frac{-5}{8}x - 5$$

$$b = -5$$

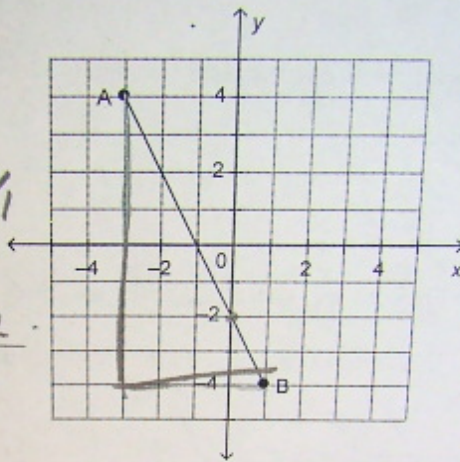
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12.

Slope: $\frac{-8}{4} = -2$

y-int: -2

Equation $y = -2x - 2$
($y = mx + b$)



13. A line passes through R(6, 9) and K(-6, 15).
- What is the slope of line RK?
 - What is the slope parallel to RK?
 - What is slope perpendicular to RK.

a) $m = \frac{15-9}{-6-6}$ b) $\frac{-1}{2}$ c) $\frac{+2}{1}$

$m = \frac{6}{-12}$

$m = \frac{1}{-2}$

16. Francine runs a T-shirt company. For each order she receives, Francine charges a flat fee of \$50, plus \$8.95 per T-shirt.
- Write an equation for the total cost, C dollars, for ordering n T-shirts.
 - George ordered 62 T-shirts. What was the total cost?
 - Jake paid a total cost of \$971.85. How many T-shirts did he order?

3. A line passes through $R(x_1, y_1)$ and $K(x_2, y_2)$.
- What is the slope of line RK?
 - What is the slope parallel to RK?
 - What is slope perpendicular to RK.

$$a) m = \frac{15-9}{-6-6} \quad b) \frac{-1}{2} \quad c) \frac{+2}{1}$$

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a)

$$m = 8.95$$

$$b = 50$$

$$x = \# \text{ of t-shirts}$$

$$y = \$$$

a) $y = 8.95x + 50$
 $C = 8.95t + 50$

b) $C = 8.95(62) + 50$
 $= 604.90$

c) $971.85 = 8.95x + 50$
 $\frac{971.85 - 50}{8.95} = \frac{8.95x}{8.95}$
 $x = 103 \text{ t-shirts.}$