

Review Slope

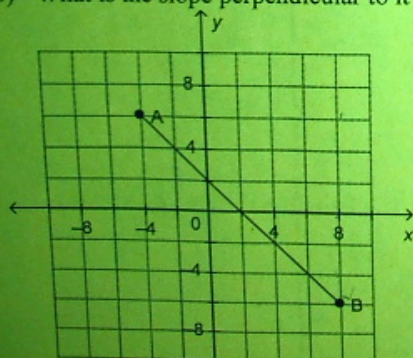
Write an equation (slope intercept form) for the graph of a linear function that has slope 8 and and -intercept of 7.

$$y = 8x + 7$$

Write the equation(slope intercept form) of a line with a y-intercept of -4 and a slope of 4/3.

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

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



$$m = \frac{\text{rise}}{\text{run}}$$

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

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

$$\text{perpendicular} = +\frac{1}{1}$$

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

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

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

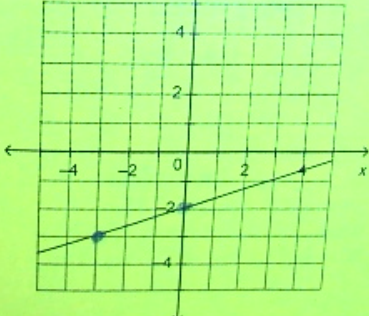
$$= \frac{16 + 8}{6 + 11}$$

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

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

7. Slope: $\frac{1}{3}$
 y-int: -2
 Equation $y = \frac{1}{3}x - 2$



8. Complete the chart:

	Equation	Slope	y-intercept
i)	$4(x - 9) = 3(y + 3)$	$\frac{4}{3}$	-15
ii)	$\frac{2}{3}x + 6 = 7y$	$\frac{2}{21}$	$\frac{6}{7}$

8.) Complete the chart:

Equation	Slope	y-intercept
i) $4(x - 9) = 3(y + 3)$	$\frac{4}{3}$	-15
ii) $\frac{2}{3}x + 6 = 7y$	$\frac{2}{21}$	$\frac{6}{7}$
iii) $5(2 - y) = 10x - 30$	$-\frac{2}{1}$	8

i) $4x - 36 = 3y + 9$
 $4x - 45 = 3y$
 $\frac{4x}{3} - 15 = y$

ii) $\frac{2}{3}x + 6 = 7y$
 $\frac{2x}{21} + \frac{18}{21} = \frac{21y}{21}$
 $\frac{2x}{21} + \frac{6}{7} = y$

iii) $5(2 - y) = 10x - 30$
 $10 - 5y = 10x - 30$
 $-5y = 10x - 40$
 $y = -2x + 8$

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

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

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

$$6(10 - K) = 17(2 + 3)$$

$$60 - 6K = 34 + 51 - 60$$

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

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

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

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

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

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

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

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

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

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

$$y\text{-int} = -5$$

Problem

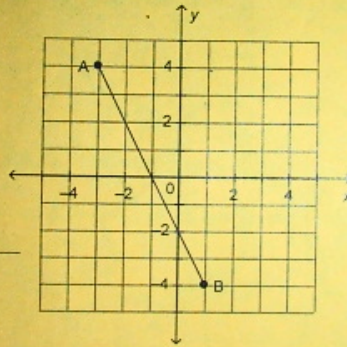
12.

$$\text{Slope: } \frac{8}{-4} = -\frac{2}{1}$$

$$y\text{-int point: } -2$$

$$\text{Equation } y = -2x - 2$$

($y=mx+b$)



13. A line passes through R(6, 9) and K(-6, 15).

- a) What is the slope of line RK?
- b) What is the slope parallel to RK?
- c) What is slope perpendicular to RK.

$$\begin{aligned} \text{a) } m_{RK} &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{15 - 9}{-6 - 6} \\ &= \frac{6}{-12} \\ &= -\frac{1}{2} \end{aligned}$$

b) Parallel $-\frac{1}{2}$

c) Perpendicular $+\frac{2}{1}$

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$$a) m_{RK} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$= \frac{15 - 9}{-6 - 6}$$

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

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

(b) Parallel $-\frac{1}{2}$ (c) Perpendicular $+\frac{2}{1}$

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.
 a) Write an equation for the total cost, C dollars, for ordering n T-shirts.
 b) George ordered 62 T-shirts. What was the total cost?
 c) Jake paid a total cost of \$971.85. How many T-shirts did he order?

$$C = 8.95n + 50$$

(b) $C = 8.95n + 50$
 $C = 8.95(62) + 50$
 $C = 554.9 + 50$
 $C = 604.90$

(c) $C = 8.95n + 50$
 $971.85 = 8.95n + 50$
 $921.85 = 8.95n$
 $\frac{921.85}{8.95} = \frac{8.95n}{8.95}$
 $103 = n$