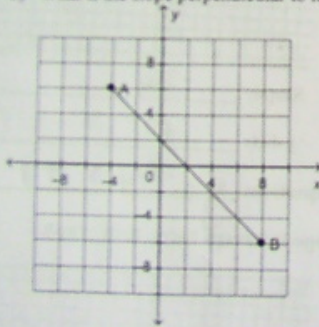


Review Slope

Name Answer Key

1. Write an equation ($y=mx+b$) for the graph of a linear function that has slope 8 and a y-intercept of 7.
2. Write the equation($y=mx+b$) of a line with a y-intercept of -4 and a slope perpendicular to $4/3$.
3. a) Determine the slope of this line segment.
b) What is the slope perpendicular to it?

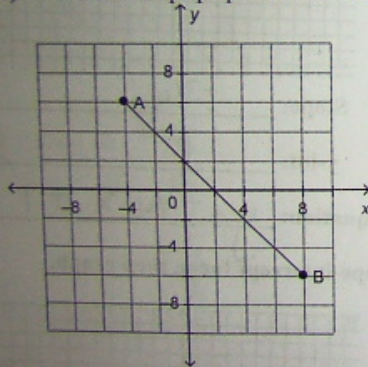


4. Determine the slope of the line that passes through $(-11, -8)$ and $(6, 16)$.
5. The slopes of two lines are $\frac{6}{11}$ and $\frac{6}{11}$. Are the two lines parallel, perpendicular, or neither?
6. The slopes of two lines are 2 and 1 .

Review Slope

Name: *Answer Key*

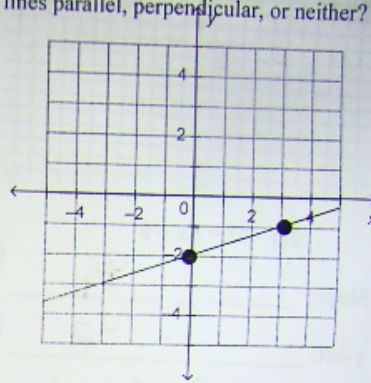
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7. Slope: $\frac{1}{3}$
 Point: -2
 Equation $y = \frac{1}{3}x - 2$



8. Complete the chart:

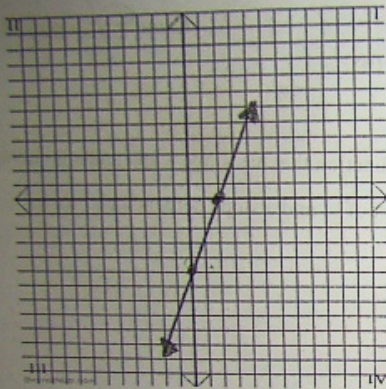
	Equation	Slope	y-intercept
i)	$4(x - 9) = 3(y + 3)$	$\frac{4}{3}$	-15
ii)	$\frac{2}{3}y + 6 = 7x$	$2\frac{1}{2}$	-9
iii)	$5(2 - y) = 10x - 30$	$-2/1$	8

$y = \frac{4}{3}x - 15$
 $y = \frac{21}{2}x - 9$
 $y = -2x + 8$

9. Find the value of K if a line passes through the points $(2, 10)$ and $(-3, K+3)$ and parallel to $-17x + 0$.
10. Find the value of K if a line passes through the points $(-9, 11)$ and $(-8, K)$ and perpendicular to $5x +$

#11 State the slope, y-int and write the equation for each of the following:

a)

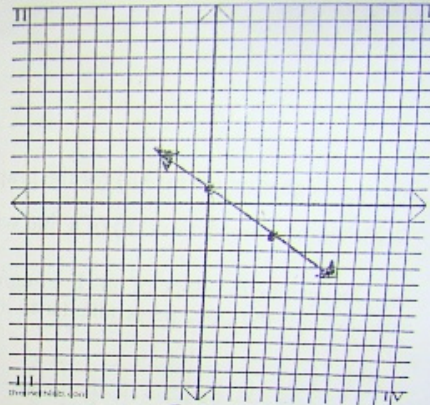


Slope: 5/2

y-int: -5

Equation: $y = \frac{5}{2}x - 5$

b)



Slope: -3/4

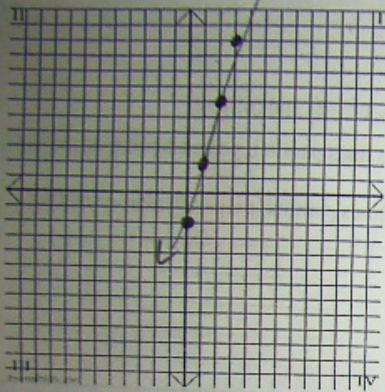
y-int: 1

Equation: $y = -\frac{3}{4}x + 1$

#12 Rearrange the following equations into the slope-intercept form, then graph.



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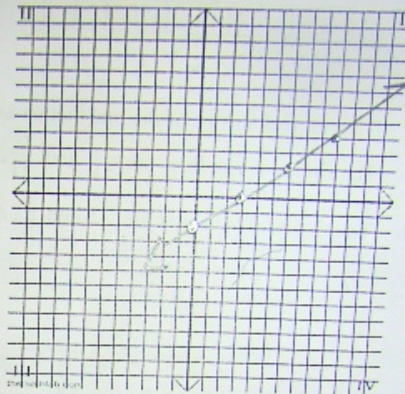


$$2(y - 1) = 8x - 6$$

Slope: 4/1

y-int: -2

$$\begin{aligned} 2(y-1) &= 8x - 6 \\ 2y - 2 &= 8x - 6 + 2 \\ 2y &= 8x - 4 \\ \frac{2y}{2} &= \frac{8x}{2} - \frac{4}{2} \\ y &= 4x - 2 \end{aligned}$$



$$3y - 6 = 2x - 12$$

Slope: 2/3

y-int: -2

$$\begin{aligned} 3y - 6 &= 2x - 12 + 6 \\ \frac{3y}{3} &= \frac{2x}{3} - \frac{6}{3} \\ y &= \frac{2}{3}x - 2 \end{aligned}$$

3. Henry tutors students having trouble in Math, he charges \$10 as a flat fee and \$15 for every hour.

$$2(y - 1) = 8x - 6$$

Slope: 4/1

y-int: -2

$$2(y - 1) = 8x - 6$$

$$2y - 2 = 8x - 6 + 2$$

$$\frac{2y}{2} = \frac{8x - 4}{2}$$

$$y = 4x - 2$$

$$3y - 6 = 2x - 12$$

Slope: 2/3

y-int: -2

$$3y - 6 = 2x - 12 + 6$$

$$\frac{3y}{3} = \frac{2x - 6}{3}$$

$$y = \frac{2}{3}x - 2$$

13. Henry tutors students having trouble in Math, he charges \$10 as a flat fee and \$15 for every hour.
- Write the equation to represent this situation.
 - How many hours of tutoring can Martha receive for \$58?
 - How much money will it cost for 11 hours of tutoring?
14. Susan babysits for \$19/hour plus a flat rate of \$10.
- Write the equation to represent this situation.
 - How many hours of babysitting can Mr. and Mrs. Jones receive for \$168?
 - How much money will it cost for 12 hours of babysitting?
15. Brittany Spears has signed a contract with the new show "Math is Marvelous" to write the theme song "Math, Math, Math, OH how I love Math!!" She will get paid \$138 every time the song is played and receives a signing bonus of \$2050.
- Write the equation to represent this situation.
 - How many times will the song have to play for Brittany to receive \$10 000?
 - How much money will Brittany get paid if the song plays 560 times?

$$1. \quad y = mx + b$$
$$y = 8x + 7$$

$$2. \quad y = mx + b$$
$$y = -\frac{3}{4}x - 4$$

$$3. \quad a) \quad m = -\frac{6}{6}$$
$$= -\frac{1}{1}$$

$$b) \quad \text{perp.} \quad +\frac{1}{1}$$

4. $(-11, -8)$
 $(6, 16)$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$
$$= \frac{16 - (-8)}{6 - (-11)}$$
$$= \frac{16 + 8}{6 + 11}$$
$$= \frac{24}{17}$$

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

$$5. \frac{6}{11}, \frac{6}{11} \Rightarrow \text{parallel}$$

$$6. -2, \frac{1}{2} \Rightarrow \text{perpendicular}$$

on sheet

$$8. \text{ i) } 4(x-9) = 3(y+3)$$
$$4x - 36 = 3y + 9$$

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

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

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

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

$$(i) \quad \frac{2}{3}y + 6 = 7x$$

$$2y + 18 = 21x - 18$$

$$\frac{2y}{2} = \frac{21x - 18}{2}$$

$$y = \frac{21}{2}x - 9$$

$$\begin{aligned} \text{iii) } 5(2-y) &= 10x - 30 \\ \overset{-10}{10} - 5y &= 10x - 30 \overset{-10}{-10} \\ \underline{-5y} &= \underline{10x} - \underline{40} \\ \underline{-5} & \quad \underline{-5} \quad \underline{-5} \\ y &= -2x + 8 \end{aligned}$$

9. $(2, 10)$
 $(-3, K+3)$

parallel

$$-17x + 6y - 13 = 0$$

$$\frac{-17x}{-6} - \frac{13}{-6} = \frac{-6y}{-6}$$

$$\left(\frac{17}{6}\right)x + \frac{13}{6} = y$$

$$m = \frac{17}{6}$$

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

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

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

$$6K + 18 - 60 = -51 - 34$$

$$\frac{6K}{6} = \frac{-43}{6}$$

$$K = -7.2$$

$$10. (-9, 11)$$

$$(-8, K)$$

perpendicular

$$\frac{5x+3}{4} = \frac{4y}{4}$$

$$\left(\frac{5}{4}\right)x + \frac{3}{4} = y$$

$$m = \frac{5}{4}$$

perp. $-\frac{4}{5}$

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

$$-\frac{4}{5} = \frac{K - 11}{-8 - (-9)}$$

$$5(K - 11) = 54(-8 + 9)$$

$$5K - 55 = 32 - 36$$

$$\frac{5K}{5} = \frac{51}{5}$$

$$K = 10.2$$

11. $R(6,9)$

$K(-6,15)$

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

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

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

14. a) $y = 19x + 10$

b) $168 = 19x + 10$

$158 = 19x$

$8.3 = x$

$$\begin{aligned} \text{c) } y &= 19x + 10 \\ &= 19(12) + 10 \\ &= 228 + 10 \\ &= 238 \end{aligned}$$

15. a) $y = 138x + 2050$

$$13. a) y = 15x + 10$$

$$b) 58 = 15x + 10$$

$$48 = 15x$$

$$3.2 = x$$

$$c) y = 15x + 10$$

3 hours

$$= 15(11) + 10$$
$$= 165 + 10$$
$$= 175$$

$$15. a) y = 138x + 2050$$

$$b) 10000 = 138x + 2050$$

$$7950 = 138x$$

$$57.6 = x$$

* 57 times *

$$c) y = 138x + 2050$$
$$= 138(560) + 2050$$
$$= 77280 + 2050$$
$$= \$79330.$$