

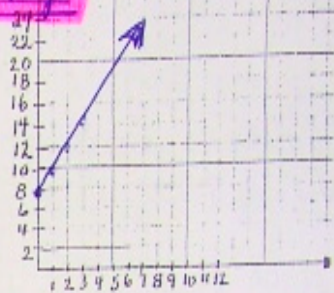
Dog Walker Worksheet - Slope Review Sheet.notebook

y-intercept form $y = mx + b$

Answer Key

$m = 2$
 $b = 8$
 $x = \text{f km}$
 $y = \$$

- Gorman taxi charges an initial fee of \$8.00 and \$2.00 for every kilometer.
 - Write the equation to represent the situation. $y = 2x + 8$
 - Draw the graph to represent the situation.
 - Write the equation in the $y = mx + b$ form. (y-intercept form) $y = 2x + 8$
 - State the slope (m) and the y-intercept (b).

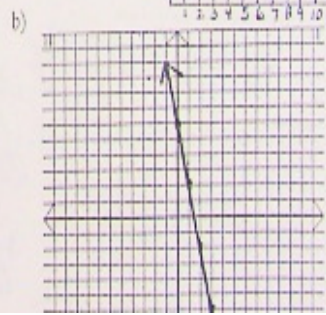
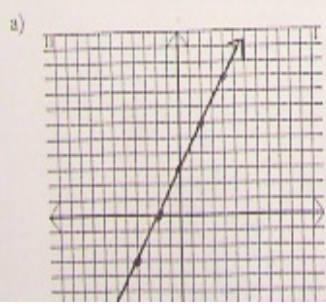


$m = 6$
 $b = 20$
 $x = \# \text{ of dogs}$
 $y = \$$

- A dog walker charges a monthly rate of \$20.00. He also charges \$6 for every dog.
 - Write the equation to represent the situation in the y-intercept form. $y = 6x + 20$
 - State the slope (m) and the y-intercept (b).
 - How much would it cost to hire the dog walker for 3 dogs? $y = 6(3) + 20 = 18 + 20 = 38$
 - How many dogs could be walked for \$56.00?
 $56 = 6x + 20$
 $36 = 6x$
 $6 = 6x$
 $x = 6 \text{ dogs}$
 - Graph the equation on the graph provided.

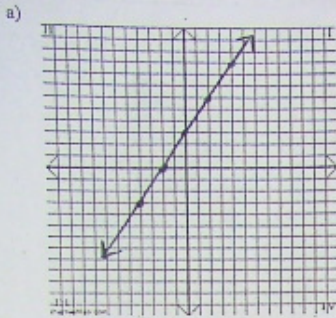


3. State the slope, the y-intercept and write the equation for each of the following.



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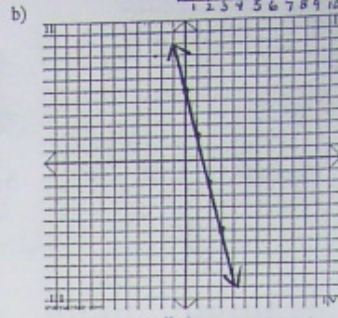
3. State the slope, the y-intercept and write the equation for each of the following.



Slope (m) : $\frac{3}{2}$

Y-intercept(b) : 3

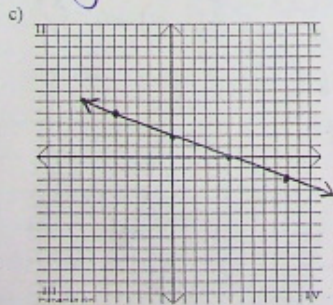
Equation : $y = \frac{3}{2}x + 3$



Slope(m) : $-\frac{4}{1}$

Y-intercept(b) : 6

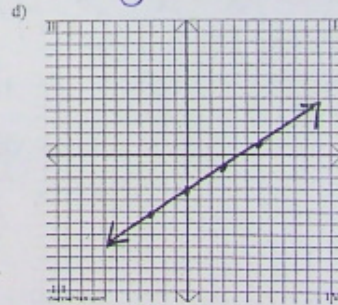
Equation: $y = -4x + 6$



Slope (m) : $-\frac{2}{5}$

Y-intercept(b) : 2

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

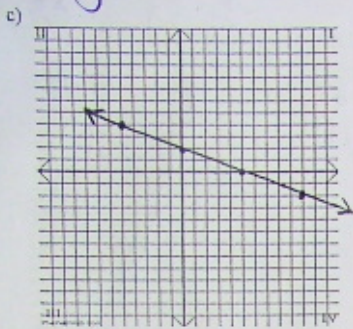


Slope(m) : $\frac{2}{3}$

Y-intercept(b) : -3

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

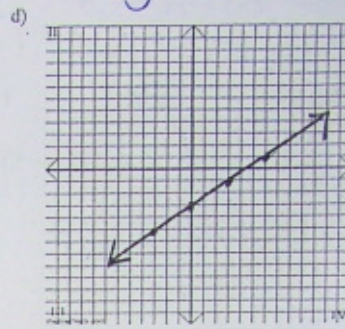
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Slope (m): $-\frac{2}{5}$

Y-intercept(b): 2

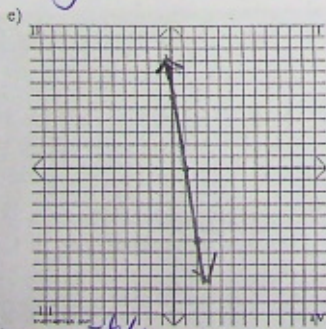
Equation: $y = -\frac{2}{5}x + 2$



Slope(m): $\frac{2}{3}$

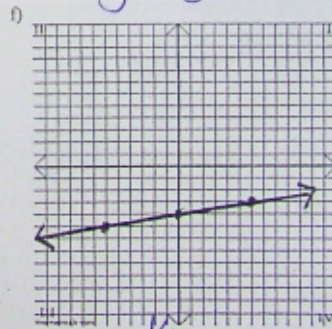
Y-intercept(b): -3

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



Slope (m): $-\frac{6}{1}$

Y-inter : 6 $y = -6x + 6$



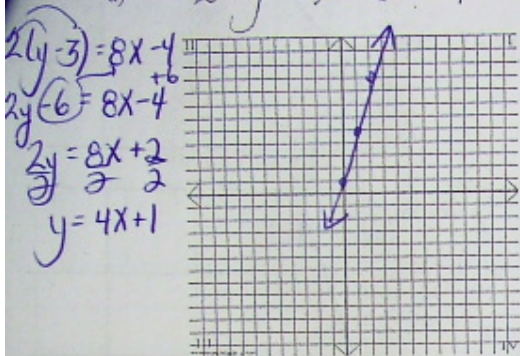
Slope(m): $\frac{1}{6}$

Y-intercept: -4 $y = \frac{1}{6}x - 4$

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4. Draw the graph, state the slope(m) and the y-intercept(b) for each of the following.

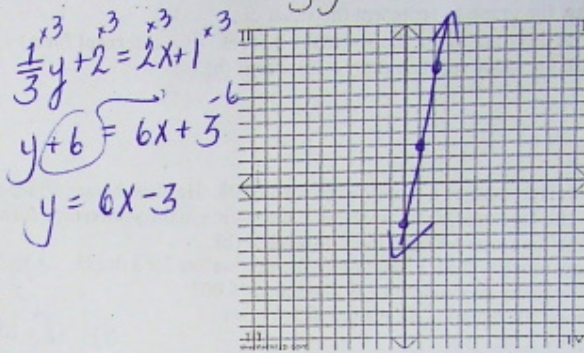
a) $2(y-3) = 8x-4$



Slope (m) : $\frac{4}{1}$

Y-intercept(b) : 1

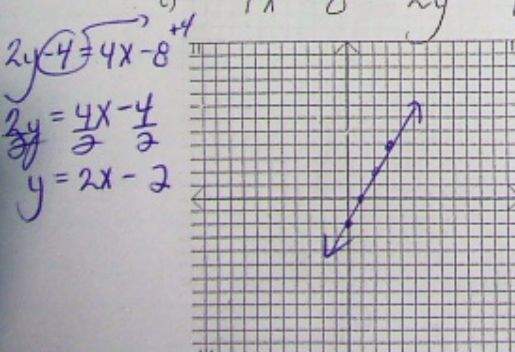
b) $\frac{1}{3}y + 2 = 2x + 1$



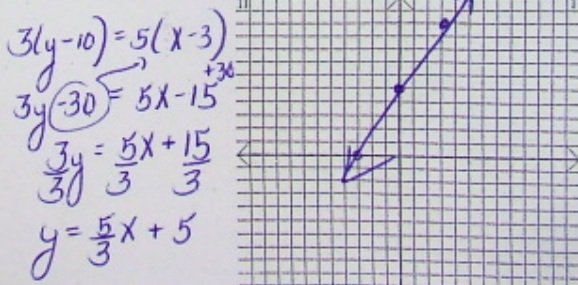
Slope(m) : $\frac{6}{1}$

Y-intercept(b) : -3

c) $4x - 8 = 2y - 4$



d) $5(x-3) = 3(y-10)$



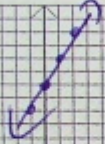
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Slope (m) : 2

Y-intercept(b) : -2

e) $\frac{1}{3}y - 1 = \frac{2}{3}x + 1$

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



Slope(m) : 5/3

Y-intercept(b) : 5

f) $\frac{1}{2}(y-2) = -2x + 3$

$1(y-2) = -4x + 6$
 $y - 2 = -4x + 6 + 2$
 $y = -4x + 8$



Slope (m) : 2

Y-intercept(b) : 6

Slope(m) : -4

Y-intercept(b) : 8

1. State the slope perpendicular to $-y = 5x - 1$.
2. State the slope parallel to $2(y - 2) = 2/3x - 1$.

7. A line passes through $(k + 2, 0)$ and $(5, k - 5)$. If the slope of the line is perpendicular to $5/3$, find k .

1. $\frac{-y}{-1} = \frac{5x-1}{-1}$ $\frac{-5}{1}$ Answer = $\frac{1}{5}$
 $y = -5x + 1$

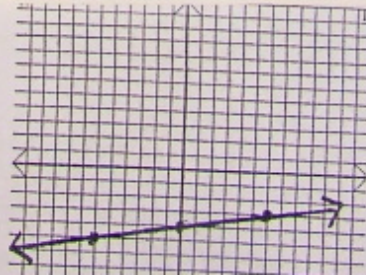
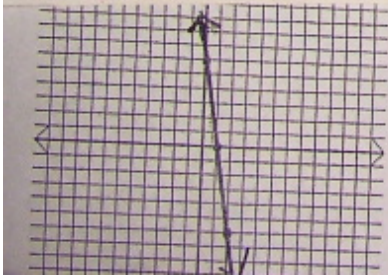
2. $2(y-2) = \frac{2}{3}x - 1 \cdot 3$
 $6(y-2) = 2x - 3$
 $6y - 12 = 2x - 3 + 12$ Answer = $\frac{1}{3}$
 $6y = 2x + 9$
 $\frac{6y}{6} = \frac{2x}{6} + \frac{9}{6}$
 $y = \frac{1}{3}x + \frac{3}{2}$

3. $\frac{1}{3}y - 4 = 2x + 5 \cdot 3$ $\frac{6}{1}$ Answer = $\frac{-1}{6}$
 $y - 12 = 6x + 15 + 12$
 $y = 6x + 27$

4. $\frac{2}{3}y - 4 = 8x - 5 \cdot 3$

4. $\frac{2}{3}y - 4 = 8x - 5$
 $2y - 12 = 24x - 9 + 12$ $\frac{12}{1}$ Answer = $\frac{-1}{12}$
 $\frac{2y}{2} = \frac{24x}{2} + \frac{3}{2}$
 $y = 12x + \frac{3}{2}$

5. $5x - 3 = -y$ Answer = -5
 $-y = \frac{5x - 3}{-1}$
 $y = -5x + 3$



6. $3(y-1) = 2x-1$
 $3y - 3 = 2x-1+3$ $\frac{2}{3} \uparrow$ Answer = $\frac{-3}{2}$
 $\frac{3y}{3} = \frac{2x+2}{3}$
 $y = \frac{2}{3}x + \frac{2}{3}$

7. $(x_1, y_1) = (k+2, 0)$ $(x_2, y_2) = (5, k-5)$ $m = \frac{-3}{5}$

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

$$\frac{-3}{5} = \frac{k-5-0}{5-(k+2)}$$

$$7. \quad \begin{matrix} x_1 & y_1 & x_2 & y_2 \\ (K+2, 0) & & (5, K-5) \end{matrix} \quad m = -\frac{3}{5}$$

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

$$-\frac{3}{5} = \frac{K-5-0}{5-(K+2)}$$

$$-\frac{3}{5} = \frac{K-5}{5-K-2}$$

$$-\frac{3}{5} = \frac{K-5}{-K+3}$$

$$5(K-5) = -3(-K+3)$$

$$5K-25 = +3K-9$$

$$5K-3K = -9+25$$

$$\frac{2K}{2} = \frac{16}{2}$$

$$K=8$$

$$8. \quad \begin{array}{cc} x_1 & y_1 \\ (9, k) \end{array} \quad \begin{array}{cc} x_2 & y_2 \\ (0, 2k+8) \end{array} \quad m = \frac{4}{3}$$

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

$$\frac{4}{3} = \frac{2k+8 - k}{0 - 9}$$

$$\frac{4}{3} = \frac{k+8}{-9}$$

$$3(k+8) = -36$$
$$3k + 24 = -36 - 24$$

$$\frac{3k}{3} = \frac{-60}{3}$$

$$k = -20$$

9. $(\overset{x_1}{K-9}, \overset{y_1}{4})$ $(\overset{x_2}{5}, \overset{y_2}{-3})$ $\frac{1}{0}$

$$K-9 = 5+9$$

$$K = 14$$

or

$$\frac{1}{0} = \frac{-3-4}{5-(K-9)}$$

$$\frac{1}{0} = \frac{-7}{5-K+9}$$

$$\frac{1}{0} = \frac{-7}{14-K}$$

$$1(14-K) = 0$$

$$14-K = 0$$

$$-K = -14$$

$$K = 14$$

