

#1-2:

- Find the x-intercept
- Find the y-intercept
- Find an additional point
- Sketch a graph

1) $2x + 4y = 12$

2) $y = \frac{1}{2}x - 6$

#3 – 4

- Find three points
- Plot the points
- Sketch a graph.
- Use the graph to find the x-intercept (say there is no x-intercept if the graph does not cross the x-axis).
- Use the graph to find the y-intercept (say there is no y-intercept if the graph does not cross the y-axis.)

3) $x = -5$

4) $y + 3 = 8$

- Sketch the graph of the line. State the value of the slope and of the y-intercept, state if there is no y-intercept.

$$y = \frac{-3}{2}x + 5$$

#6 – 7: Find the slope of the line that passes through the two points.

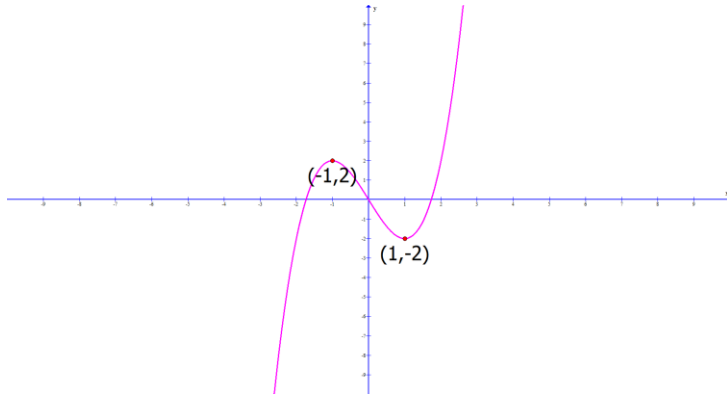
6) *first point* (1,5) *second point* (-3,9)

7) *first point* (2,4) *second point* (2,5)

8) $y = \frac{-2}{7}x + 6$

- Find the slope of the given line
- Find the slope of all lines parallel to the given line
- Find the slope of all lines perpendicular to the given line.

9) Use the graph of $f(x)$ to find the average rate of change from $x = -1$ to $x = 1$



10) Use the slope intercept formula to find the slope-intercept form of an equation of a line with slope m , passing through the point (x, y) . Write your answer in *slope – intercept* form.

$m = 2$ point $(5, -4)$

11) Use the point slope formula to find the equation of a line with slope m , passing through the point (x, y) . Write your answer in slope-intercept form.

$m = -3$ point $(1, 5)$

12) Use the point slope formula to find the equation of a line passing through the points (x_1, y_1) and (x_2, y_2) . Write your answer in slope-intercept form.

$(6, 8)$ and $(1, -2)$

13) Find the equation of the vertical line passing through the point (x, y) .

point $(2, 9)$

14) Find the equation of the horizontal line passing through the point (x, y) .

point $(1, -3)$

15) Etta Jane receives a weekly allowance of \$8. She gets an additional \$1 each day she cleans her bedroom.

a) Create an equation of a line that can be used to find the amount of money (M) Etta Jane receives in a week she cleans her bedroom (b) times.

b) What will her allowance be in a week when she cleans her room 2 times?

#16-17: Solve each system of equations using the substitution method. If the system has no solutions say, that it is inconsistent. If the system is dependent write your answer in the form $\{(x, y) | \text{write either equation}\}$

16)

$$\begin{aligned}x + 3y &= 9 \\6x - 5y &= 31\end{aligned}$$

17)

$$\begin{aligned}x &= -3y + 12 \\4x + 12y &= 48\end{aligned}$$

#18 – 19: Solve each system of equations using the elimination method. If the system has no solutions say, that it is inconsistent. If the system is dependent write your answer in the form $\{(x, y) | \text{write either equation}\}$

18)

$$\begin{aligned}2x + 3y &= 13 \\3x - 6y &= 9\end{aligned}$$

19)

$$\begin{aligned}4x + 2y &= 16 \\8x + 4y &= 36\end{aligned}$$

20) Etta has quarters and dimes. She has a total of 15 coins and the value of the coins is \$3.00. How many of each type of coin does she have?

21) Kristin wants to make 60 gal. of a 40% alcohol solution by mixing a 20% alcohol solution and a 50% alcohol solution. How much of each solution must she use