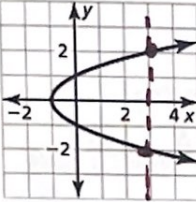
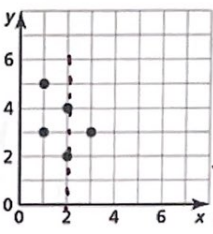
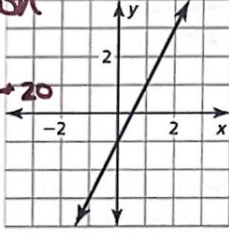


Linear Graphing Review Practice

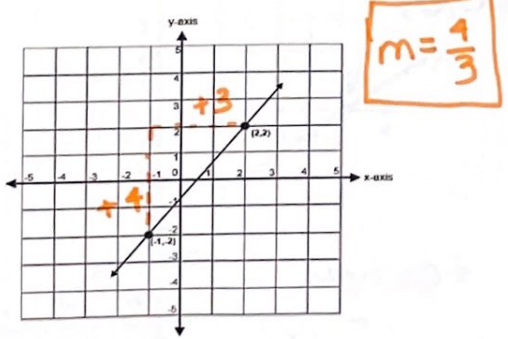
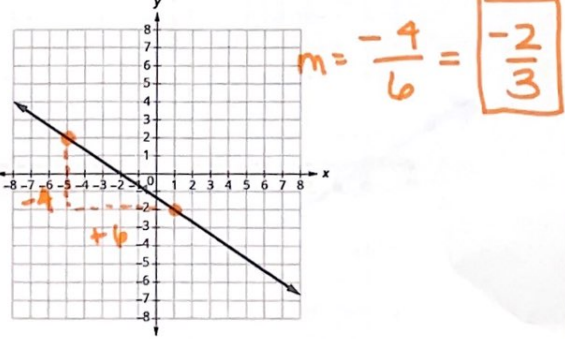
Name _____ Date _____ Period _____

Level 2

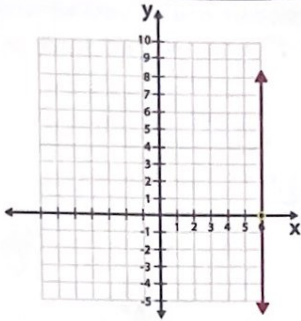
1-4 State if the following are a function or not a function. Explain your reasoning. State the Domain and Range of each.

<p>1. </p> <p>- not a function for a value of x there is more than 1 value of y</p> <p>- Domain $x \geq -1$ Range all real numbers</p>	<p>2. </p> <p>not a function for a value of x there is more than 1 y value.</p> <p>D: $\{1, 2, 3\}$ R: $\{2, 3, 4, 5\}$</p>												
<p>3. <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px;">Input, x</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">1</td> <td style="padding: 2px;">3</td> <td style="padding: 2px;">2</td> <td style="padding: 2px;">1</td> </tr> <tr> <td style="padding: 2px;">Output, y</td> <td style="padding: 2px;">1</td> <td style="padding: 2px;">5</td> <td style="padding: 2px;">10</td> <td style="padding: 2px;">15</td> <td style="padding: 2px;">20</td> </tr> </table></p> <p>not a function for $x=1$ there is $y=5+20$</p> <p>D: $\{0, 1, 2, 3\}$ R: $\{1, 5, 10, 15, 20\}$</p>	Input, x	0	1	3	2	1	Output, y	1	5	10	15	20	<p>4. </p> <p>yes a function. For every x value, there is only 1 y.</p> <p>D: All real numbers R: All real numbers</p>
Input, x	0	1	3	2	1								
Output, y	1	5	10	15	20								
<p>5. Define slope: m</p> <p>slope m is the change in y over the change in x.</p> <p>$m = \frac{\Delta y}{\Delta x}$</p>	<p>6. Evaluate the functions. Show work.</p> <p>a. For the function: $f(x) = -3x + 2$</p> <p>$f(2) = -3(2) + 2$ $= -6 + 2$ $f(2) = -4$</p> <p>b. For the function: $f(x) = x^2 - 2x$</p> <p>$f(-2) = (-2)^2 - 2(-2)$ $= 4 + 4$ $f(-2) = 8$</p>												

7-14 Determine the slope in the following representations.

<p>7. </p> <p>Is the slope <u>positive</u>, negative, zero or undefined?</p>	<p>8. </p> <p>Is the slope positive, <u>negative</u>, zero or undefined?</p>
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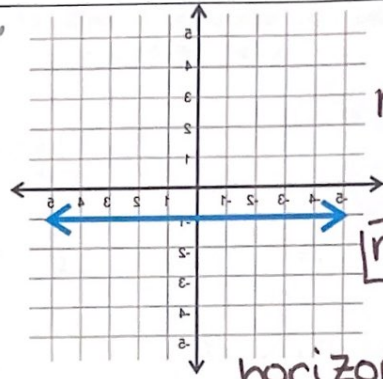
9.



$$m = \frac{\Delta y}{\Delta x}$$

$m = \text{undefined}$
vertical lines have undefined slope

10.



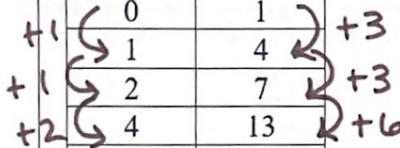
$$m = \frac{\Delta y}{\Delta x}$$

$$m = 0$$

horizontal lines have zero slope

11.

x	y
0	1
1	4
2	7
4	13
5	16



$$m = \frac{3}{1} = 3$$

or

$$m = \frac{6}{2} = 3$$

12.

$(-3, -6)$ and $(2, 4)$. Use the slope formula.

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - (-6)}{2 - (-3)} = \frac{10}{5} = 2$$

13. In order to become a member of the hiking club, there is a \$15 sign-up fee and a \$9 monthly fee.

$$m = 9$$

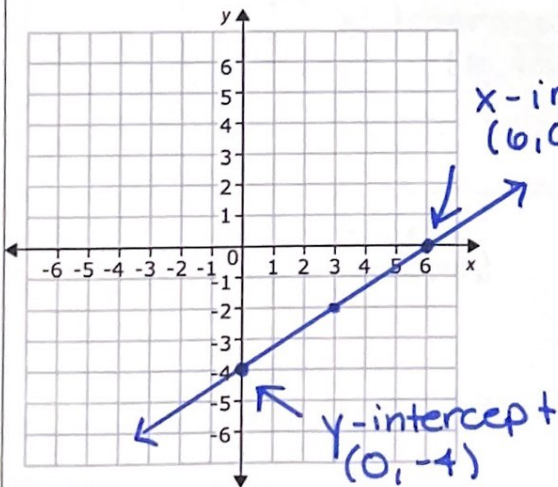
14. A jet 12 miles above the ground begins descending at a rate of 120 miles per hour. What is the domain and range of this situation?

$$m = 120$$

Graph the following functions.

15. $f(x) = \frac{2}{3}x - 4$

$m = \frac{2}{3}$ $b = -4$ y-intercept $(0, -4)$



label the x and y intercept on the graph.

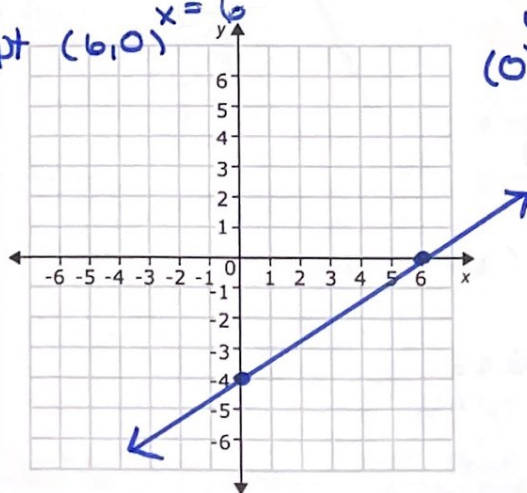
16. Find the x and y intercepts and graph the line and graph.

$$2x - 3y = 12$$

x-intercept: $2x - 3(0) = 12$
 $2x = 12$
 $x = 6$

y-intercept: $2(0) - 3y = 12$
 $-3y = 12$
 $y = -4$

$(6, 0)$ $(0, -4)$

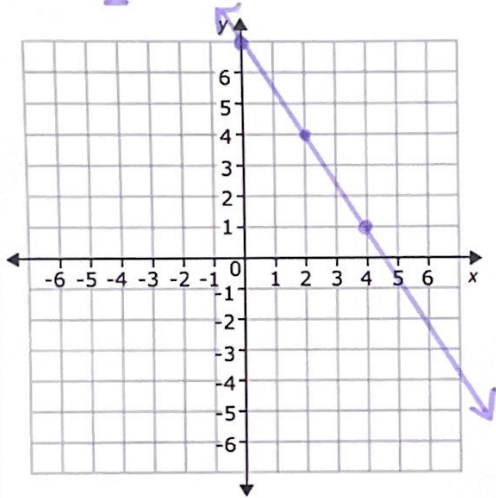


Level 3

17. Rewrite the function into slope-intercept form and graph the line. $3x + 2y = 14$

$$\begin{aligned} & \frac{-3x}{2} \quad \frac{-3x}{2} \\ 2y &= -3x + 14 \\ y &= \frac{-3}{2}x + 7 \end{aligned}$$

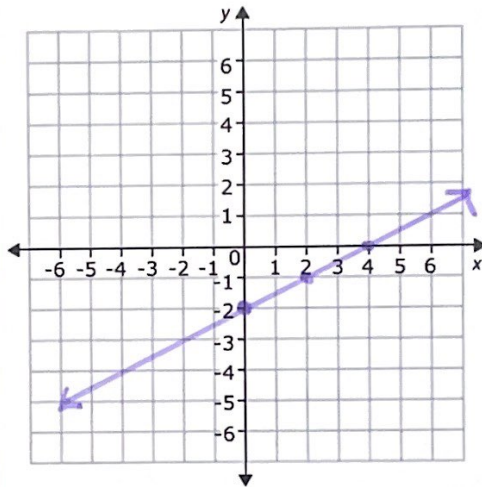
$m = -\frac{3}{2}$ $b = 7$ y-intercept $(0, 7)$



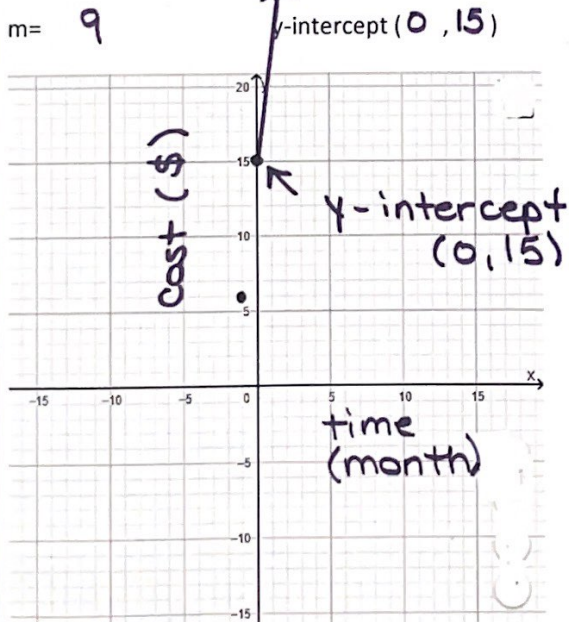
18. Rewrite the function into slope intercept form and graph the line. $3x - 4 - 4y = x + 4$

$$\begin{aligned} & \frac{+1}{-3} \quad \frac{+1}{-3} \\ 3x - 4y &= x + 8 \\ -3x & \quad \quad \quad -3x \\ -4y &= -2x + 8 \\ y &= \frac{1}{2}x - 2 \end{aligned}$$

$m = \frac{1}{2}$ $b = -2$ y-intercept $(0, -2)$

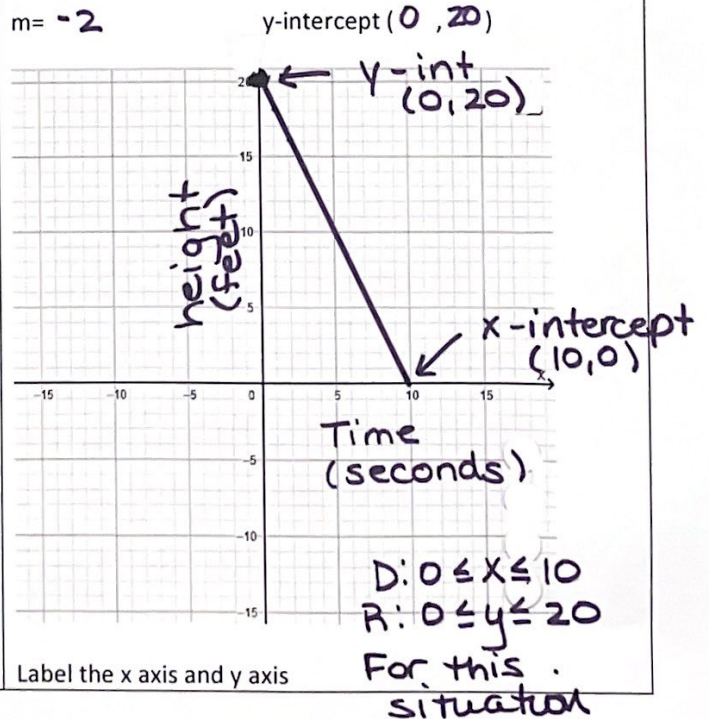


19. In order to become a member of the hiking club, there is a \$15 sign-up fee and a \$9 monthly fee. Graph the situation.



Label the x axis and y axis.

20. A hot air balloon is 20 feet above the ground and begins descending at a rate of 2 feet per minute. What is the domain and range of this situation?



Label the x axis and y axis