Name	
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Date:\_\_\_\_\_\_Block:\_\_\_\_\_

What you	Things to remember	Examples				
need to know & be able to do						
1. Determine the	Domain: input, x- values, "left to right"	1. Determine the domain & range of the function.	2. Determine the domain & range of the function.			
characteristics of linear functions Days 11 & 12	Range – output, y- values, "bottom to top" x-intercept(s): where the graph crosses the x- axis. y-intercept(s): where the graph crosses the y- axis. maximum/minimum: the highest or lowest points. Increase: where the graph looks like it's going "up hill". Decrease: where the	Domain:       Range:         Interval of Increase:       Interval of Decrease:         Maximum:       Minimum:	Interval of Increase:			
	graph looks like it's going "down hill". Constant: where the graph is horizontal.	End Behavior: As $x \rightarrow \infty$ , $f(x) \rightarrow \As x \rightarrow -\infty, f(x) \rightarrow \Zeros: X-Intercept: Y-Intercept:$	End Behavior: As $x \rightarrow \infty$ , f(x) $\rightarrow$ As $x \rightarrow -\infty$ , f(x) $\rightarrow$ Zeros: X-Intercept: Y-Intercept:			
	End Behavior: "left side" $x \rightarrow -\infty$ "right side" $x \rightarrow \infty$ What direction do the left and right arrows ao?					
2. Determine where the graph is positive and negative Day 12	For what x-values is the graph in the positive (above x- axis) region and in the negative (below x-axis) region?	3. Give the inequality for the parts of the graph that are positive and negative.	4. Give the inequality for the parts of the graph that are positive and negative.			

## Learning Goal 5.2 – Applications of Linear Functions

3. Characteristics of functions without a graph. Day 11 & 12	X-intercept: (a, 0) Y-intercept (0, b)	<ul> <li>5. Which functions have an interval of increase? How do you know?</li> <li>A. f(x) = 2x - 5</li> <li>B. f(x) = -1/2x + 4</li> <li>C. f(x) = -3x - 1</li> <li>D. f(x) = 3x + 9</li> </ul>			6. What are the x and y intercepts for the equation $3x - 6y = 24$ ?	
4. Characteristics in the Real World Day 13	Domain: x- values Range: y-values X-intercept: (a, 0) Y-intercept (0, b) Slope: Change in y over change in x	9. W app rela the dev A. Si B. Se C. S	alculate the slop rpret them in term nario. Number of Balloons 2 4 6 8 7 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 7 8 7 7 7 8 7 7 7 7 8 7 7 7 7 8 7 7 7 7 7 8 7 7 7 7 8 7 7 7 8 7 7 7 7 8 7 7 7 7 7 8 7 7 7 7 7 8 7 7 7 7 7 7 7 7 8 7	Total Cost of Balloons (in Dollars) 6 12 18 24 24 24 24 24 24 24 24 24 24 24 24	that se to	8. Calculate the slope, x-intercept, and y-intercept. Interpret them in terms of the problem scenario. Television Image: the slope intercept is the profit of the profit is provided by the function P(c) = 0.87c, were c represents the number of ice cream cones sold. What set of numbers would be appropriate for the domain and range? Explain why. Domain:

5. Creating Equations from a Word Problem Day 14 & 15	Standard Form: Ax + By = C *Total *Two different amounts Slope Intercept Form: y = mx + b *Rate *Starting Amount/ One Time Fee	11. Ed has \$36 to buy paints and brushes for a school project. Jars of paint cost \$4 each. The brushes are \$2 each. Write an equation to determine the combination of brushes and paint he can buy. If he buys 3 jars of paint, how many brushes can he buy?	12. Gail orders CDs for \$8 each plus a total shipping cost of \$5. Write an equation to determine the total cost of purchasing CDs. If Gail spent \$53, how many CDs did she order?			
6. Comparing Linear Functions Day 16	Determine what the slope and y- intercepts are and interpret them in a real world context	13. Which function has the greater rate of change and y-intercept? Function 1: $y = 2x + 3$ Function 2: (0, 4), (1, 8), (2, 12)	14. The table to the right shows the distance (in meters) Runner A and Runner B ran at different time intervals. Which runner has a faster average speed from 20 to 31 seconds?			
Day to	before comparing.		Time         Runner A         Runner B			
			0 0 0			
			9         120         120           20         168         213			
			$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
		15. Which function has the greatest y-inter <b>Function A</b> : f(x) = 3x	rcept? Function B: 2x + 3y = 12			
		<b>Function C:</b> a line that has a slope of 2 And passes through (1, -4). (Hint: 5.1 – Day 10)	Function D:			