

Creating and Interpreting Linear Functions

1.) You borrow \$120 from your grandmother. You pay back \$18 each week.

a.) Identify the slope and explain what the slope represents for this scenario.

b.) Identify the y-intercept and explain what the y-intercept represents for this scenario.

c.) Write an equation to represent the amount owed (y) given after any number of weeks (x) to grandma.

d.) Will you have grandma paid back after 5 weeks? If not how much do you still owe?

2.) To repair an air conditioner, David charges a one-time fee for a service call plus an hourly rate for the time required for the repair.

Input, x	1	2	3	4	5	6
Output, y	120	165	210			

a.) Complete the input output table to show the total amount y that David will charge for x number of hours worked.

b.) What is the hourly rate that he charges? What part of a linear equation would this be?



c.) Identify the y-intercept and explain what the y-intercept represents for this scenario.



3.) You are packing candles in boxes. You can fit 15 candles in each box.



a.) Identify the slope and explain what the slope represents for the scenario.

b.) Identify the y-intercept and explain what the y-intercept represents for this scenario.

c.) Write an equation to represent the total number of candles (y) given any number of boxes(x).

4.) The equation $y = 2x + 10$ represents the weekly growth of Lou's DVD collection. The table below represents the growth of Gene's DVD's.

Number of weeks,	0	1	3	5	10
Gene's DVDs,	2	5	11	17	32

Whose collection grows are a faster rate? Justify.

Graph the growth of both DVD collections on the coordinate plane.

