

Initial Value/ Y-intercept

Define **initial value/ y-intercept**: *The point where the line crosses the y-axis*

Scenario: Kerry and Frank want to save up money by putting their earnings in a piggy bank. They both come up with two different plans.

A. Kerry has \$8.00 in her bank and wants to put in \$0.50 each week.

Function Rule

$y = 0.50x + 8$

Create the Table

Week (x)	Total \$ (y)
0	8
1	8.50
2	9
3	9.50
4	10
5	10.50
8	12

+1
+1
+1

+0.5
+0.5
+0.5
+0.5

B. Frank has \$1.00 in his piggy bank and wants to put in \$2.00 each week.

Create the Rule

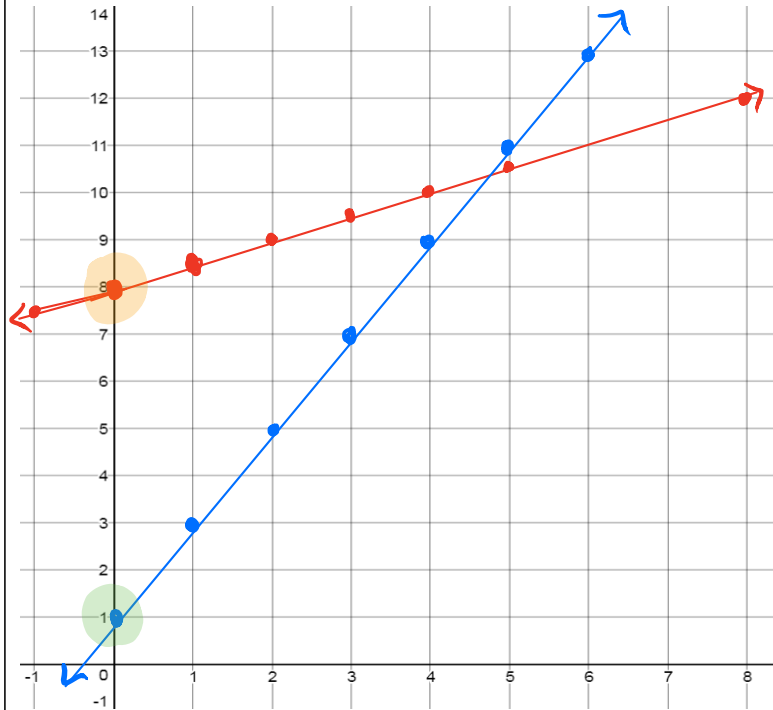
$y = 2x + 1$

Table

Week (x)	Total \$ (y)
0	1
1	3
2	5
3	7
4	9
5	11
8	17

+2
+2
+2

+2
+2
+2



**Please graph both scenarios labeling the lines as A and B before you answer the following questions.

1. Who has more money in their bank at week 1?

Kerry

2. Who has more money in their bank at week 10?

Frank

3. What affects where each line starts at week 0?

The money they initially had in their bank affects where the line starts.

4. Which plan would you provide you with the most money?

*Kerry's between week 0 - 4
Frank at week 5 and after*

Warm Up

Using the graph of a linear function below, create a table and the rule.

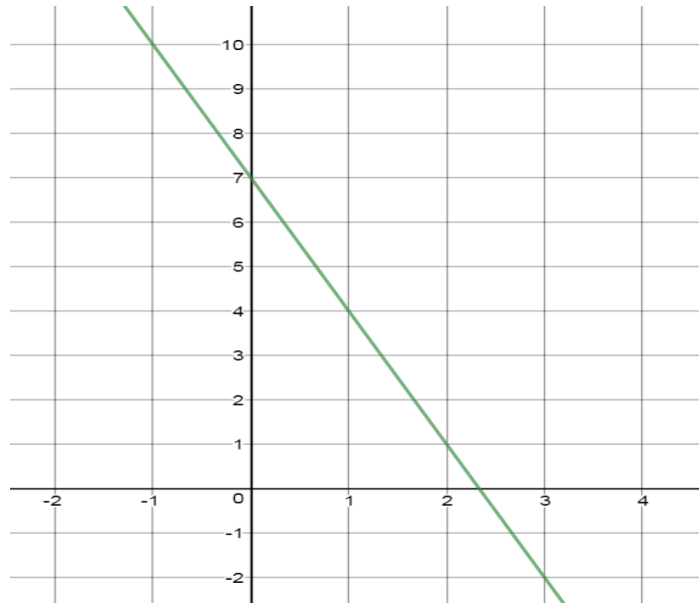


Table:

X	-1	0	1	2	3
Y	10	7	4	1	-2

Create the rule using the form $y = mx + b$

Rule:

$$y = \underline{-3x + 7}$$

$$m = \underline{-3}$$

$$b = \underline{7}$$

Fold on the line

Glue This Side Into Notes