

# STARTER

## Nickels and Dimes

Only certain numbers of nickels and dimes add up to exactly \$1

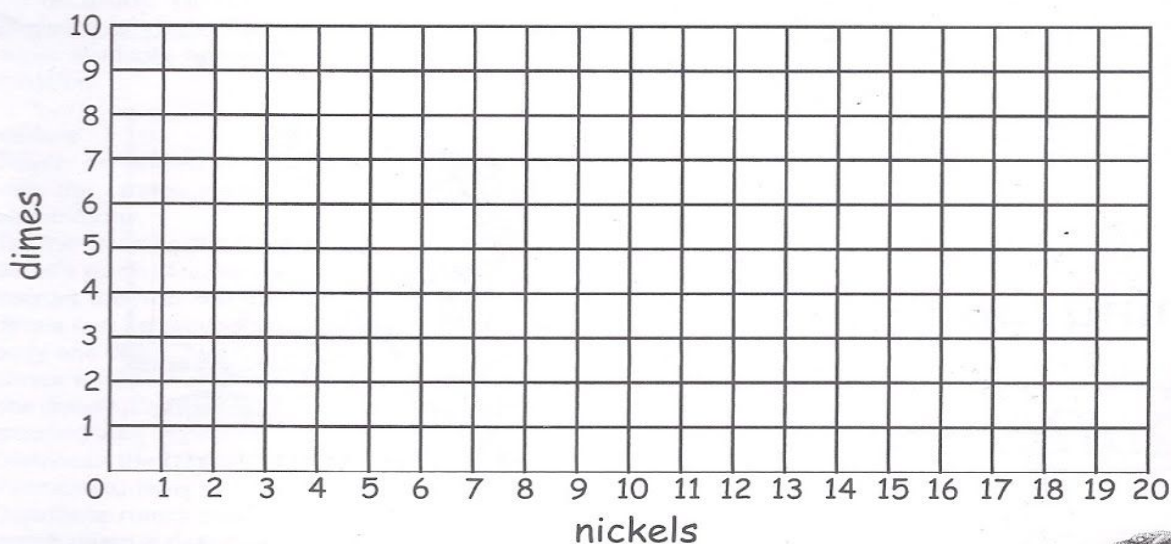
Let  $n$ , the independent variable, represent nickels.

Let  $d$ , the dependent variable, represent dimes.

1. Build the table.

$n$	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$d$	10																				

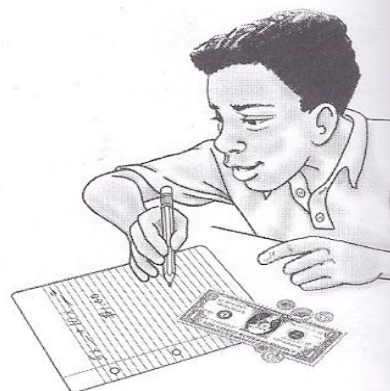
2. Draw the graph.



3. Write the rule.

4. What is the domain?

What is the range?



5. What is the x-Intercept and what does it represent?

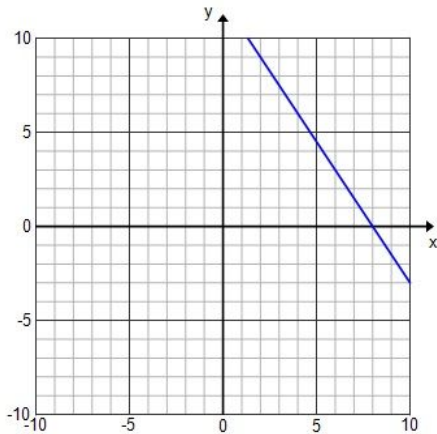
6. What is the y-Intercept and what does it represent?

## Group Matching Assignment

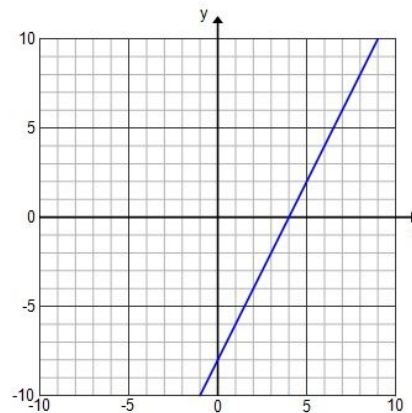
Cut apart the Following and Put them into Groups that go together. Matching

Run off on Cardstock

### Group 1



### Group 2



**C. Jaime has \$1.00 at the start**

**D. x-Intercept : After 8 weeks Jamie has no money left.**

**E. Jamie earns a quarter every week**

**F. X-Intercept: Jamie takes 4 weeks to pay off the debt.**

**G. Equation:  $2x - y = 8$**

**H. Equation:  $5x + 2y = 30$**

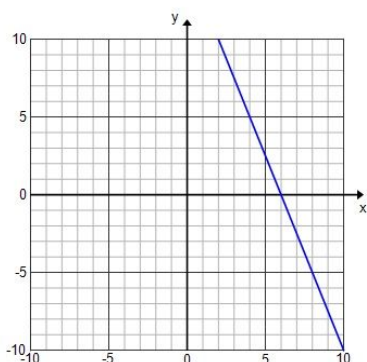
**I. X-Intercept:  $(-4, 0)$ .**

**J. Y-Intercept: Jamie has \$15 from babysitting...**

**K. X-Intercept: Jamie has no money in 6 weeks.**

**L. Equation**  
 $y = \frac{-5}{2}x + 15$

### Group 3.



### N. TABLE:

Weeks	Dollars
0	12
2	9
5	4.5
7	1.5
8	0

**O. Equation:**

$$3x + 2y = 24$$

**P. Equation:**

$$y = -2.5(x - 6)$$

**Q. Jamie puts 2 dollars a week to pay off her debt.**

**R. Equation:**

$$f(x) = 2(x - 4)$$

**S. Jamie spends \$1.50 every week**

**T. Y-Intercept: Jamie has \$12 from her birthday**

**U. Equation:**

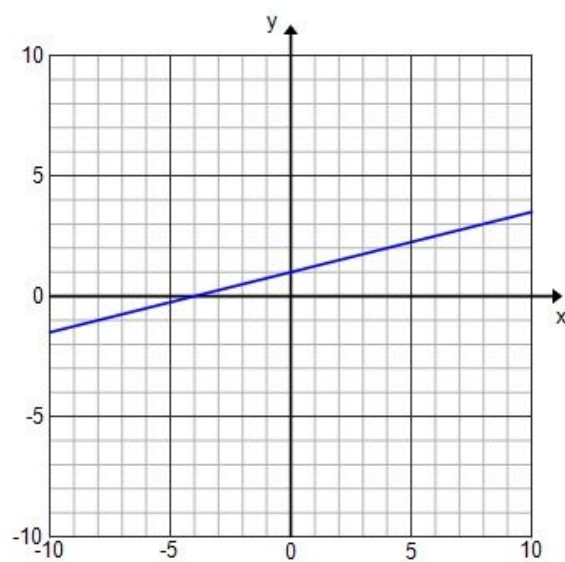
$$y = -\frac{3}{2}x + 12$$

**V. Y-Intercept: Starts with a Debt of \$8.00**

**W.**

Weeks	Dollars
1	12.5
2	10
4	5
5	2.5
6	0

**GROUP 4.**



**Y.**

weeks	Dollars
0	1
4	2
8	3
12	4

**Z.**

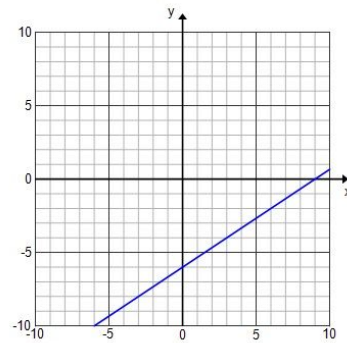
**Equation:**

$$y = 2x - 8$$

# A#1-2B Lines - X and Y Intercepts

Name \_\_\_\_\_

1. Find the Equation and the X & Y- Intercepts of the Graph: (weeks,Dollars)



Equation:

X-Intercept ( , )

What does it represent?

Y-Intercept ( , )

What does it represent?

2. Find the Equation and the X & Y- Intercepts of the Table:

hours	Gallons of water
-4	18
0	15
4	12
8	9
12	6
16	3
20	0
24	-3
28	-6

Equation:

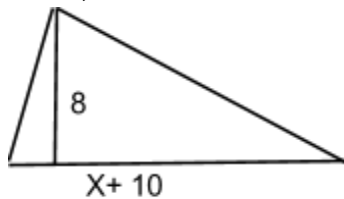
X-Intercept ( , )

What does it represent?

Y-Intercept ( , )

What does it represent?

3. Write an equation for the Area of the triangle below, and then solve for x.



4.  $f(x) = -5(x - 7)$

Create a Table of Values for above equation.

hours	miles from home

x-Intercept ( , )

What does it represent?

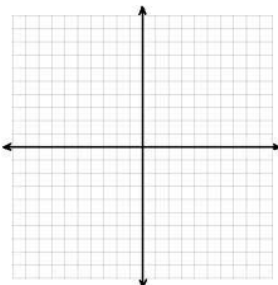
y-Intercept ( , )

What does it represent?

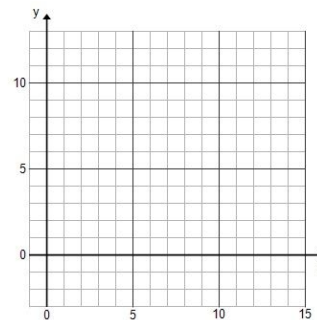
5. Stan starts with a debt of \$20. By week 4 he has paid it off. Use the graph below to figure out the slope if needed.

Equation:

How much does she save/spend each week?



6. Graph the line  $4x + 3y = 24$  and find the x and y-Intercepts.



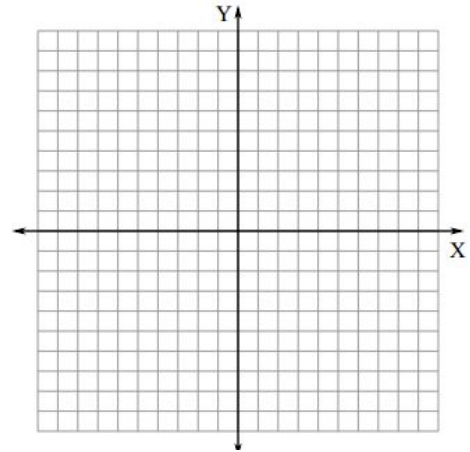
X-Intercept ( , )

Y-Intercept ( , )

7. Solve the following algebraically.

$$-\frac{1}{2}x + 6 = \frac{3}{2}x - 2$$

8. Solve Graphically.  $-\frac{1}{2}x + 6 = \frac{3}{2}x - 2$



9. . Billy earned \$15.00 in the 2 days he ran his lemonade stand. He sold 20 cups each day. He decides to open his stand for 23 days over the summer.

Write an equation that represents  $m$ , the total amount of money that he will make over the summer, assuming his sales rate is the same as it was during the two day trial.

10. Write an equation for the total cost of an item with a 8% tax rate.

What is the total cost of an item that costs \$65?

11.

A car is traveling at a steady speed. The table shows the distance ( $d$ ) the car will travel for different times ( $t$ ), in hours.

Distance ( $d$ )	Time ( $t$ ) in hours
160	2
400	5
560	7
800	10

Which equation represents the relationship between the distance and time for this car?

- (A)  $d = 158 + t$
- (B)  $d = t - 158$
- (C)  $d = 80t$
- (D)  $t = 80d$

12. The perimeter of the rectangle is 164 inches. The length is four more than twice the width. Find the length and the width of the rectangle.

13. Find the slope through the points  $(-4,1)$   $(8,16)$

