OBJECTIVE:
YOU WILL REVIEW SOLVING LITERAL EQUATIONS

solving for y

agenda
warm up
hw check
notes p.52
homework

warm up

1. What is the value of y if $(3, y)$ is a solution to the equation $5x - 3y = 18$?

A 3 C 1
B -1 D -11

2. Solve the following equation for n.

$$m = \frac{n-3}{x}$$

$\cdot x$

$xm = n - 3$

$+3 \quad +3$

$xm + 3 = n$

Answers:

1. b and c
2. b
3. c and d
4. {-1,2,17}
5. {6, 4, -6}
6. $\{-\frac{1}{3}, \frac{1}{3}, 1\}$
7. $\{-\frac{5}{2}, -\frac{3}{2}, -\frac{1}{2}\}$
8. 4 days
9. B
10.

x	y
-3	15
-1	11
1	7
3	3
5	-1

11.

x	y
-2	-20
0	-10
2	0
4	10
6	20
8	30

12. D
13. -8

Algebra I - Unit 3: Topic 2 – Solutions to Linear Equations

Practice – Solutions to Linear Equations **No Textbook Correlation**

Name _____ Date _____ Period _____

Which ordered pair(s) are solutions of each equation? (there can be more than one answer)

1. $3x = 2y - 1$ A (1, -2) B (-1, -1) C $(-2, -\frac{5}{2})$ D (0,-2)

2. $2y = x + 3$ A (-1, -1) B (-3, 0) C (1, -2) D $(0, -\frac{3}{2})$

3. $5x = 2 - y$ A (3, 12) B (-3, -17) C (2, -8) D (-1, 7)

Find the range for each equation if the domain is {-1, 0, 5}.

4. $y = 3x + 2$

$y = 3(-1) + 2$ $y = 3(0) + 2$ $y = 3(5) + 2$

$= 15 + 2$

$\{-1, 2, 17\}$

5. $2y = 8 - 4x$

Find the domain for each equation if the range is {-2, 0, 2}.

6. $y = -3x + 1$

7. $2x - y = -3$

$2x + 2 = -3$

$-2 \quad -2$

$2x = -5$

$x = -5/2$

$2x - 0 = -3$

$\frac{2x}{2} = \frac{-3}{2}$

$\{-\frac{5}{2}, -\frac{3}{2}, 3\}$

8. The cost of renting a DVD at a certain store is described by the function $f(x) = 4x + 3$ in which $f(x)$ is the cost and x is the time in days. If Heather has $19 to spend, what is the number of days that she can rent a single DVD if tax is not considered?

Algebra I - Unit 3: Topic 2 – Solutions to Linear Equations

9. A recycling center pays $0.35 per pound of glass that it receives. If students at Falcon High School want to raise $500 in a glass-recycling project, what is a reasonable number of pounds of glass they must collect?

A 750 lb C 500 lb

B 1500 lb D 175 lb

$m = .35p$

$\frac{500}{.35} = \frac{.35p}{.35}$

Fill in the table for each equation and domain:

10. $2x + y = 9$ D: {-3, -1, 1, 3, 5 }

x	y

11. $-5x + y = -10$ D: {-2, 0, 2, 4, 6, 8}

x	y

12. If $(x, -3.2)$ is a solution to the equation $4x = 5y - 17$, what is the value of x?

A 0.84 B 0.25 C -5.96 D -8.25

X

13. If $(-7, y)$ is a solution to the equation $2x - 7y - 42 = 0$, what is the value of y?

$2(-7) - 7y - 42 = 0$

$-14 - 7y - 42 = 0$

$-7y - 56 = 0$

$+56 \quad +56$

$-7y = 56$

$y = -8$

solve the following equations for y

p.52

Highlight/circle y.

1. $2x + y = 7$

$-2x \quad -2x$

$y = -2x + 7$

CAN'T +/- letters & #s

PVT X FIRST

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

$+\frac{1}{2}x$

$y = \frac{1}{2}x + 6$

3. $-5 = 4x - y$

$-4x \quad -4x$

$\frac{-4x - 5}{-1} = \frac{-y}{-1}$ ← divide everything by −1

$4x + 5 = y$

4. $4x - 3y = 12$

$-4x \quad -4x$

$\frac{-3y}{-3} = \frac{-4x + 12}{-3}$

$y = \frac{4}{3}x - 4$

once we solve for y...

All calculator buttons for graphs, tables, and Y= are right below the screen.

- To enter an equation into the calculator, press Y=
  This means all equations must be solved for y = !
- To graph an equation, press GRAPH
  Use Domain and Range to choose the BEST viewing window.
- To fill in the table, press 2nd, then GRAPH
  Scroll up or down to view different numbers for x

use the calculator to fill in the table and sketch the graph

5. $y = -\frac{1}{4}x + 6$

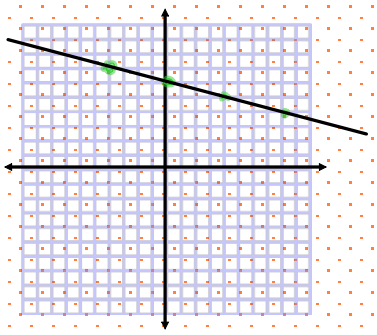
FRACTION

ALPHA

Y=

parenthesis

x	y
-4	7
0	6
4	5
8	4



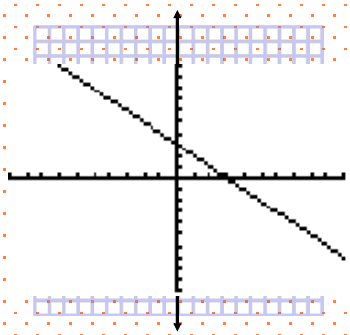
6. $2x + 2y = 6$

$-2x \quad -2x$

$\frac{2y}{2} = \frac{-2x + 6}{2}$

$y = -1x + 3$

x	y
-2	5
0	3
2	1
5	−2



Algebra 1 Unit 3: Solving for *y*

Practice – Solving for *y*

Name: _____ Date: _____ Period: _____

Solve each of the following problems for y. Next to each number is a color and below is a safari scene. As you answer each problem, color the picture appropriately!

1. (orange) $x + y = 4$
2. (brown) $x - 2y = 8$
3. (pink) $6x + 2y = 12$
4. (blue) $6x - 3y = 9$
5. (yellow) $5(x - y) = 20$
6. (green) $-x + 6y - 12 = 2x$
7. (red) $-2(x + 3y) = 18$
8. (purple) $5y + 9 = 2x - 3x$

$-2y \quad -2y$

$3y + 9 = -3x$

$-9 \quad -9$

9. (black) $2x - y = 4$

$\frac{3y}{3} = \frac{-3x-9}{3} \quad \frac{3}{3}$

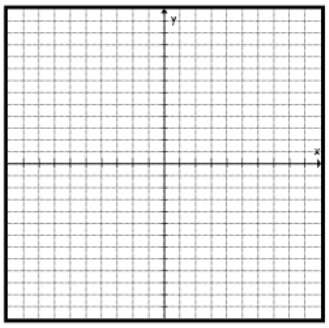
$y = -x - 3$

Algebra 1 Unit 3: Solving for y

Enter the following equations into the calculator to complete the table and graph.

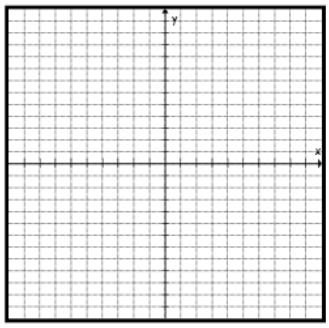
10. $7x + y = 3$

x	y
-1	
0	
1	
2	



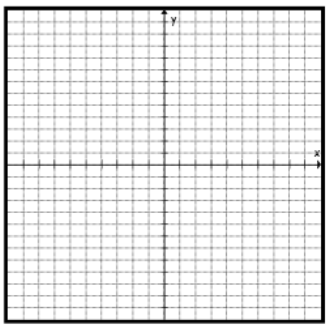
11. $4x + 2y = 6$

x	y
-2	
-1	
0	
1	
2	



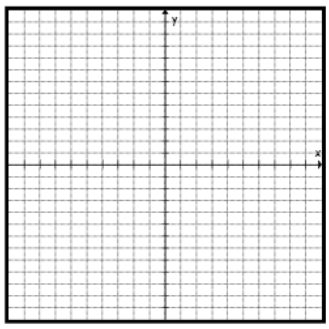
12. $2x - y = 5$

x	y
-1	
0	
1	
2	
3	



13. $y + 4 = 0$

x	y
-2	
-1	
0	
1	
2	
3	



Look at questions 10-13 to answer the following questions.

14. Which graphs are increasing from left to right?

15.Which graphs are decreasing from left to right?

16. Which tables, if any, hold this statement true, "as x increases, y decreases"?

17. Which tables, if any, hold this statement true, "as x increases, y increases"?