October 15, 2018, Monday

Oct 11-1:39 PM

Foundations of Algebra Unit 3: Equations and Inequalities Test Review

Name:_____ Date:_____

Unit 3 Test Review

Simplify the following fractional operations:

$\frac{11}{8}+\frac{7}{6}$	$\frac{5}{8}+\frac{7}{2}$
$\frac{5}{3}-\frac{3}{5}$	$2-\frac{1}{2}$
$\frac{3}{2}\cdot\frac{11}{8}$	$\frac{9}{5}\div 7$
$\frac{7}{4}\div\frac{1}{3}$	$\frac{1}{4}\div 2$

Equation	Steps
$3(x-4)=42$	Given

Foundations of Algebra Unit 3: Equations and Inequalities Test Review

Jennifer is a college student who works two jobs after school and on weekends trying to make some extra spending money and to help pay for her tuition. At Job A, she gets $9 an hour, and at job B, she gets $11 an hour.

1. If Jennifer only works at Job A, a. Write an equation for her total income I for working a hours.

b. How much will she make if she works 15 hours in the week? Justify your answer.

c. If she wants to make $153 dollars per week, how many hours would she have to work? Justify your answer.

2. If Jennifer only works at Job B, a. Write an equation for her total income I for working b hours.

b. How much will she make if she works 15 hours in the week? Justify your answer.

c. If she wants to make $341 dollars per week, how many hours would she have to work? Justify your answer.

3. If Jennifer works at both Job A and Job B during the week,

a. Write an equation for her total income for working a hours at Job A and b hours at Job B.

b. How much will she make if she works 12 hours at each job during the week. Justify your answer.

Foundations of Algebra Unit 3: Equations and Inequalities Test Review

Convert the following to slope-intercept form and identify the slope and y-intercept:

$2x+5y=-25$ $-4x-y=9$

m= m=

b= b=

Graph the following linear equations:

$2x+5y=10$ $9x-2y=8$

Solve each system of Linear Equations by Graphing:

$x-2y=6$ $3x-2y=8$

$x+2y=-2$ $2x+y=3$

$y=-\frac{5}{2}x-1$

October 16, 2018, Tuesday

Solve each system by graphing.

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

Sketch the graph of each line.

3) $5x+2y=-2$

2) $5x+2y=-2$

$-5x$ $-5x$

$\frac{2y}{2}=\frac{-5x-2}{2}$

$y=\frac{-5x}{2}-\frac{2}{2}$

$y=-\frac{5}{2}x-1$

$b=-1$

$m=-\frac{5}{2}$

(3,-1)

Wed test!

Oct 11-1:39 PM

Foundations of Algebra Name_____ ID: 1

Unit 3 Quiz #2 Review $y=mx+b$ Date_____ Period____

Determine the slope and y-intercept of the following. (Hint-Convert to slope intercept form)

1) $5x+4y=0$ $y=-\frac{5}{4}x+0$ $b=0$ $m=-\frac{5}{4}$

$-5x$ $-5x$

$\frac{4y}{4}=\frac{-5x+0}{4}$

$y=-\frac{5}{4}x+0$

2) $x+2y=-4$

$-x$ $-x$

$\frac{2y}{2}=\frac{-x-4}{2}$

$y=-\frac{x}{2}-\frac{4}{2}$ $m=-\frac{1}{2}$ $b=-2$

3) $x+2y=2$

$-x$ $-x$

$\frac{2y}{2}=\frac{-x+2}{2}$ $y=\frac{-1x}{2}+1$ $m=-\frac{1}{2}$ $b=1$

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

4) $5x-3y=-9$

$-5x$ $-5x$

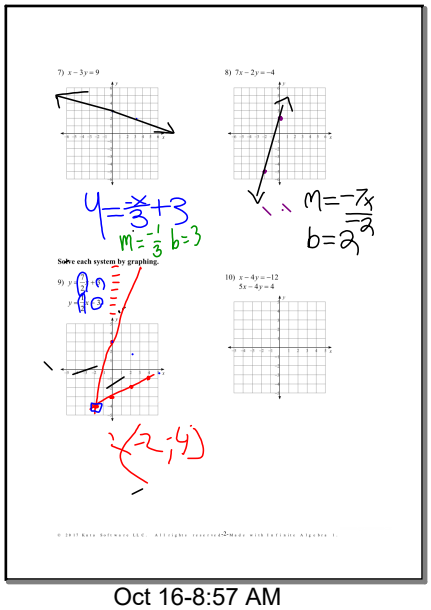
$\frac{-3y}{-3}=\frac{-5x-9}{-3}$ $y=\frac{5}{3}x+0$ $m=\frac{5}{3}$ $b=0$

Sketch the graph of each line.

5) $y=-\frac{7}{3}x+3$ $m=\frac{7}{3}=\frac{7}{-3}$ $b=3$

6) $y=\frac{1}{4}x-2$ $m=\frac{1}{4}$ $b=-2$

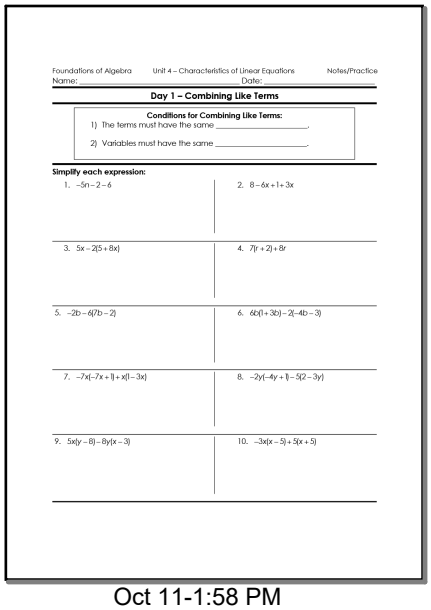
Oct 16-8:56 AM



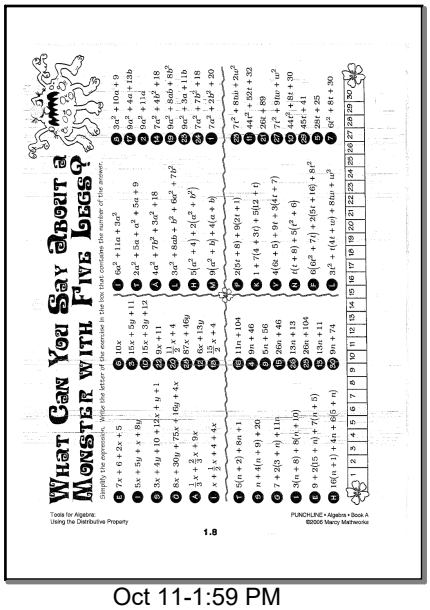
Oct 16-8:57 AM

October 17, 2018,
Wednesday

Oct 11-2:05 PM



Oct 11-1:58 PM



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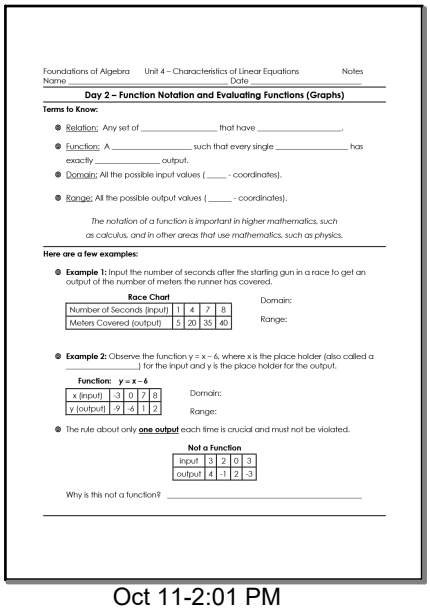
October 18, 2018, Thursday

Oct 11-2:00 PM



Oct 11-2:01 PM

Foundations of Algebra Unit 4 – Characteristics of Linear Equations Notes

How do I determine if a relation is a function?

- Each input must have _____ output.
- Look at the graph...The vertical line test: **No** vertical line can pass through _____ points on the graph.

Examples: Are these relations functions?

1. $\{(3,2),(4,3),(5,4),(6,5)\}$

2. 

3. 

4. 

Function Notation:

- Function notation is _____
- f(x) is a fancy way of writing ____ in an _____. It is pronounced _____.
  - Example: f(x) = 2x + 4 is the same as y = 2x + 4

Function Notation	x-y Notation
$f(x)=5x+2$	
	$y=-3x-7$

Evaluation Functions:

- Evaluate $f(x)=x^2-2x+3$, when $x=-3$ and $x=4$.

Oct 11-2:01 PM

Foundations of Algebra Unit 4 – Characteristics of Linear Equations Practice
Name: _____ Date: _____

Day 2 – Function Notation and Evaluating Functions (Graphs)

Decide whether the graph represents y as a function of x. Explain your reasoning.

1. 

2. 

3. 

Decide whether the relation is a function.
If it is a function, give the domain and the range.

4.

Input	Output
1	7
	-7
2	8
	-8

5.

Input	Output
3	2
5	4
7	6

6.

Input	Output
0	-6
2	-4
4	-2
6	0

Evaluate the function when $x=3$, $x=0$, and $x=-2$.

7. $f(x)=2x-5$

8. $h(x)=6x+2$

9. $g(x)=2.4x$

10. $f(x)=0.5x+12$

11. $h(x)=\frac{2}{3}x-1$

12. $f(x)=\frac{3}{5}x+2$

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October 19, 2018, Friday

Oct 11-2:02 PM

Foundations of Algebra Unit 4 – Characteristics of Linear Equations Notes/Practice
Name: _____ Date: _____

Day 3 - Evaluating Functions and Simplifying Expressions

Use the following functions to find the given value:

$f(x)=x+2$ $g(x)=\frac{1}{2}x+1$ $h(x)=2x^2-3$ $k(x)=3-x$

1. $f(2)=$ _____
2. $g(4)=$ _____
3. $f(-6)=$ _____
4. $k(5)=$ _____
5. $h(2)=$ _____
6. $g(6)=$ _____
7. $h(-3)=$ _____
8. $k(-4)=$ _____

Simplify each expression.

9. $-6(1+3x)-2x(-3x+2)$
10. $3x(y-4)-5x(-7x+y)$
11. $-6x^2(6x-1)-8x(1+8x)$
12. $-7(y^2+7)+2y(8y^2+1)$
13. $2x(x^2+1)x^2-9x-3)$
14. $-3x^2(2y-4x)+5x^2(1-8x)$

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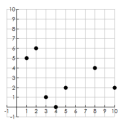
Foundations of Algebra Unit 4 – Characteristics of Linear Equations Notes/Practice

Find the indicated values by using the graph.

1. $h(2)=$ _____
2. $h(4)=$ _____
3. $h(1)=$ _____
4. $h(5)=$ _____
5. $h($_____$)=4$
6. $h($_____$)=1$
7. *What are the values for* $h($_____$)=2$?



Find the indicated values by using the table.

8. $g(10)=$ _____
9. $g(22)=$ _____
10. $g(0)=$ _____
11. $g(28)=$ _____
12. $g($_____$)=21$
13. $g($_____$)=33$

x	g(x) = 2x + 1
0	
2	
4	
6	
8	
10	
12	
14	
16	
18	
20	
22	
24	
26	

Simplify each expression.

14. $2[4x^2-8]-3x[-3x+2]$
15. $3x(x-6)-8(7x+2)$
16. $-3x^2(4x+2)+5x(1-6x)$
17. $5(x^2-4)+2x(-3x^2+7)$

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Oct 11-2:05 PM