October 23, 2018, Tuesday

Rewrite the following in slope intercept form (y = mx + b).

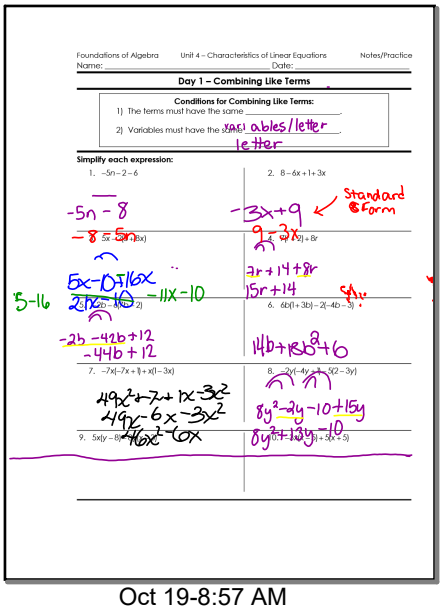
1) $3x - 4y = 0$ → $y = \frac{3}{4}x + 0$

2) $x + y = -5$ → $y = -1x - 5$

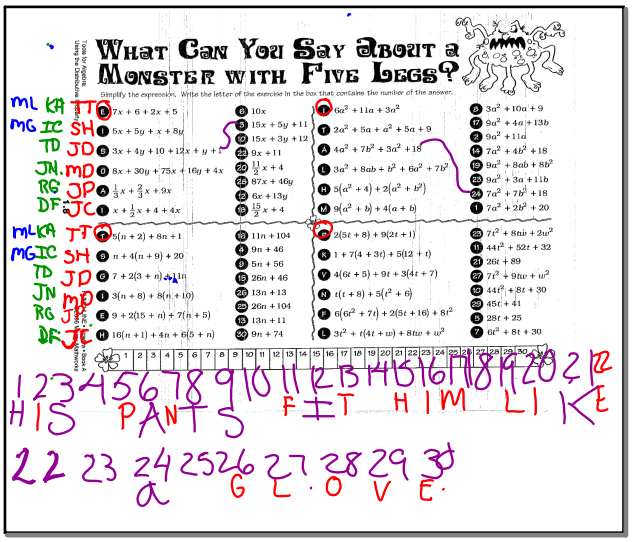
3) $-x + y - 1 = 0$ → $y = \frac{1}{1}x + 1$

4) $0 = 1 + \frac{1}{3}x - y$ → $-y = 1 + \frac{1}{3}x$; $\frac{-y}{-1} = \frac{-\frac{1}{3}x}{-1} + \frac{1}{-1}$; $y = \frac{1}{3}x - 1$

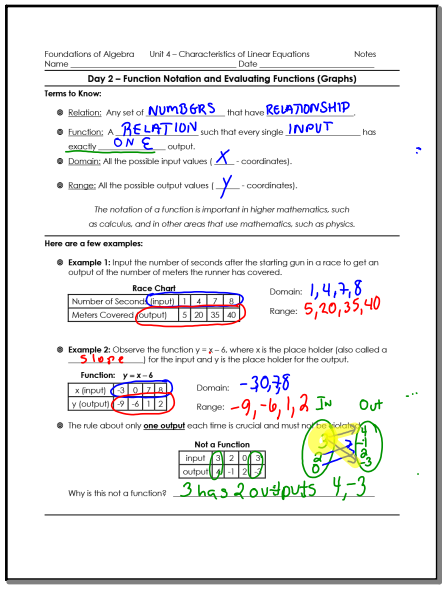
Oct 16-2:33 PM

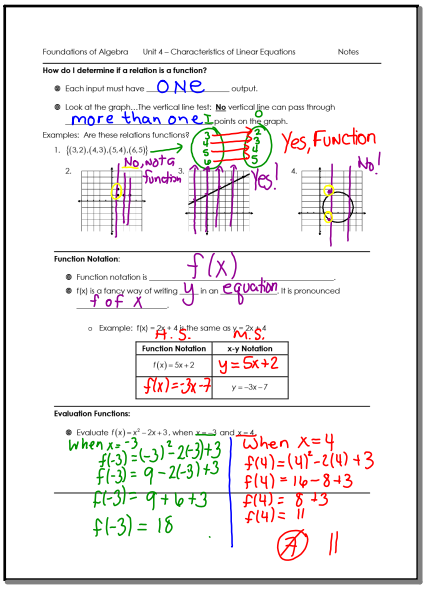


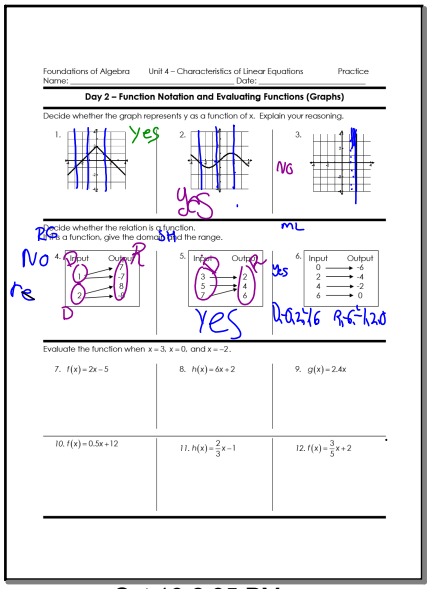

Oct 19-8:57 AM




Oct 19-8:57 AM




Oct 16-2:35 PM

October 23, 2018, Tuesday

**Simplify each expression.**

1) $-4p-1+10$

2) $10(x+10)$

3) $-8(10+3k)+10$

4) $-3(-1-a)+2(8-6a)$

$3+3a+16-12a$

$19-9a$

$-9a+19$

Oct 16-2:36 PM

October 25, 2018, Thursday

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

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

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

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

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

Oct 16-2:38 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.**

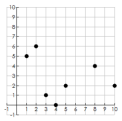
9. $-6(1+3x)-2x(-3x+2)$
10. $3x(y-4)-5x(-7x+y)$
11. $-6x^2(6x-1)-8x(1+8x)$
12. $-7(y^2+7)+2y(8y^2+1)$
13. $2x(x^2+1)x^2-9x-3)$
14. $-3x^2(2y-4x)+5x^2(1-8x)$

Oct 16-2:36 PM

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.**

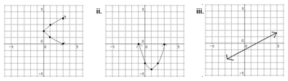
14. $2(4x^2-8)-3x(-3x+2)$
15. $3x(x-6)-8(7x+2)$
16. $-3x^2(4x+2)+5x(1-6x)$
17. $5(x^2-4)+2x(-3x^2+7)$

Oct 16-2:38 PM

Foundations of Algebra Name _____ Block_____

Unit 4 Study Guide 1

1) Circle the graph/s which are relations.




2) Which graph/s from question 1 is a function?

**A** graph i **B** graphs ii and iii

**C** graphs i and ii **D** graph iii

**3)** Which represents the **domain** of the following relation? {(-6, 5), (-4, 3), (-1, 0), (4, 3)}

**A** 5, 3, 0, 3

**B** -6, 4, 1, -4

**C** 6, 4, 1, 4

**D** -6, -4, -1, 4

4. Which of the following does represent a way to determine if something is a function, if you have a table of values?

**A** The graph passes the vertical line test.

**B** The table of values has one input for every output.

**C** The table of values has one output for every input.

**D** None of the above.

5) List the range of the following: _____

| In | Out |
|---|---|
| -3 | 5 |
| -2 | 6 |
| -1 | 7 |
| 0 | 8 |
| 1 | 9 |
| 2 | 10 |
| 3 | 11 |

Oct 16-2:42 PM

Foundations of Algebra Name _____ Block_____

6) If $f(x)=3x-2$, evaluate the following:

a) $f(0)$ b) $f(-1)$

7) evaluate the given function as indicated, $f(x)=3x-2$ $g(x)=\frac{1}{2}x+3$

a. $f(2)=$

b. $g(4)=$

c. $f(0)+g(2)=$

d. $g(0)+f(-3)=$

**Simplify each expression.**

8) $2x-8+1+9x$

9) $10(1-2n)$

10) $4a^2-9a(2a+3)$

11) $-(6-10v)+5(2v+9)$

Let $f(x)=2x-1$, $g(x)=3x$, and $h(x)=x^2+1$. *Compute the following:*

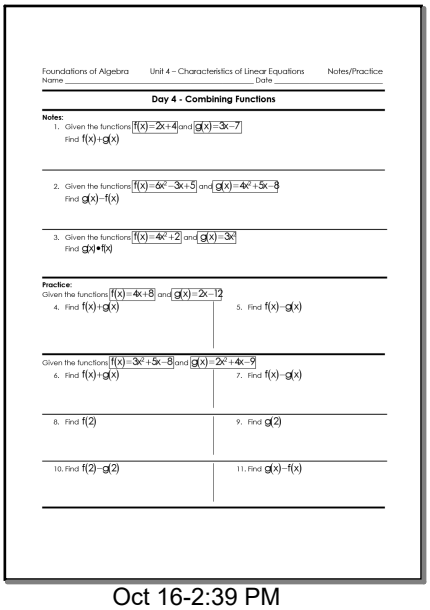
12) $f(x)+g(x)$

13) $2g(x)-f(x)$

14) $g(x)-h(x)$

15) $g(x)\cdot h(x)$

Oct 16-2:43 PM



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

**Day 4 - Combining Functions**

**Notes:**

1. Given the functions $f(x)=2x+4$ and $g(x)=3x-7$
   Find $f(x)+g(x)$

2. Given the functions $f(x)=6x^2-3x+5$ and $g(x)=4x^2+5x-8$
   Find $g(x)-f(x)$

3. Given the functions $f(x)=4x^2+2$ and $g(x)=3x^3$
   Find $g(x)\bullet f(x)$

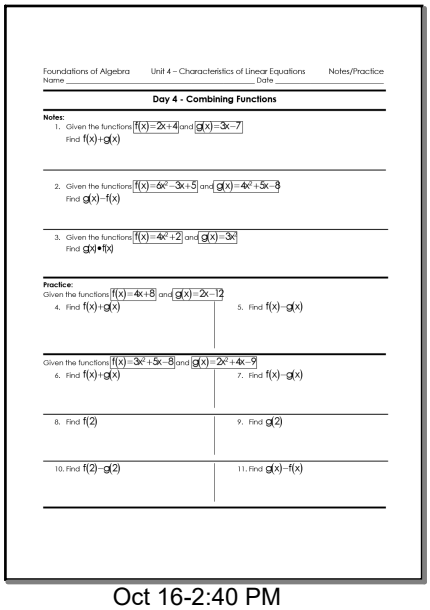
**Practice:**
Given the functions $f(x)=4x+8$ and $g(x)=2x-12$

4. Find $f(x)+g(x)$
5. Find $f(x)-g(x)$

Given the functions $f(x)=3x^2+5x-8$ and $g(x)=2x^2+4x-9$

6. Find $f(x)+g(x)$
7. Find $f(x)-g(x)$
8. Find $f(2)$
9. Find $g(2)$
10. Find $f(2)-g(2)$
11. Find $g(x)-f(x)$

Oct 16-2:39 PM



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

**Day 4 - Combining Functions**

**Notes:**

1. Given the functions $f(x)=2x+4$ and $g(x)=3x-7$
   Find $f(x)+g(x)$

2. Given the functions $f(x)=6x^2-3x+5$ and $g(x)=4x^2+5x-8$
   Find $g(x)-f(x)$

3. Given the functions $f(x)=4x^2+2$ and $g(x)=3x^3$
   Find $g(x)\bullet f(x)$

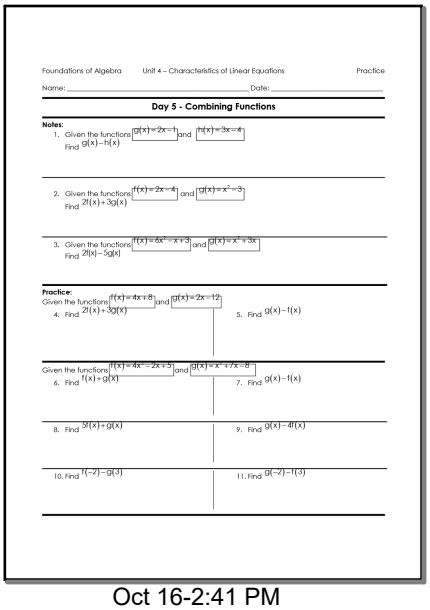
**Practice:**
Given the functions $f(x)=4x+8$ and $g(x)=2x-12$

4. Find $f(x)+g(x)$
5. Find $f(x)-g(x)$

Given the functions $f(x)=3x^2+5x-8$ and $g(x)=2x^2+4x-9$

6. Find $f(x)+g(x)$
7. Find $f(x)-g(x)$
8. Find $f(2)$
9. Find $g(2)$
10. Find $f(2)-g(2)$
11. Find $g(x)-f(x)$

Oct 16-2:40 PM



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

**Day 5 - Combining Functions**

**Notes:**

1. Given the functions $g(x)=2x-1$ and $h(x)=3x-4$
   Find $g(x)-h(x)$

2. Given the functions $f(x)=2x-4$ and $g(x)=x^2-3$
   Find $2f(x)+3g(x)$

3. Given the functions $f(x)=6x^2-x+3$ and $g(x)=x^2+3x$
   Find $2f(x)-5g(x)$

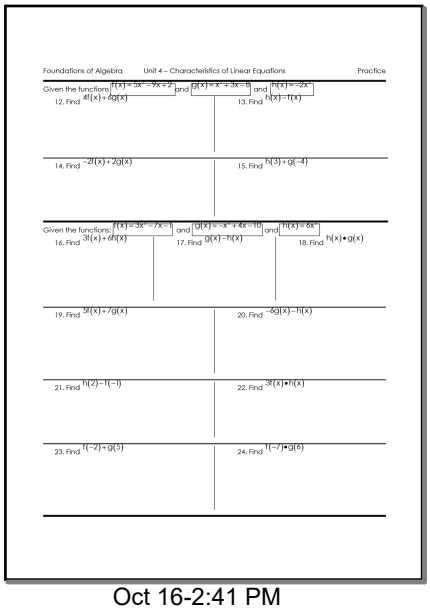
**Practice:**
Given the functions $f(x)=4x+8$ and $g(x)=2x-12$

4. Find $2f(x)+3g(x)$
5. Find $g(x)-f(x)$

Given the functions $f(x)=4x^2-2x+5$ and $g(x)=x^2+7x-8$

6. Find $f(x)+g(x)$
7. Find $g(x)-f(x)$
8. Find $5f(x)+g(x)$
9. Find $g(x)-4f(x)$
10. Find $f(-2)-g(3)$
11. Find $g(-2)-f(3)$

Oct 16-2:41 PM



Foundations of Algebra Unit 4 – Characteristics of Linear Equations Practice

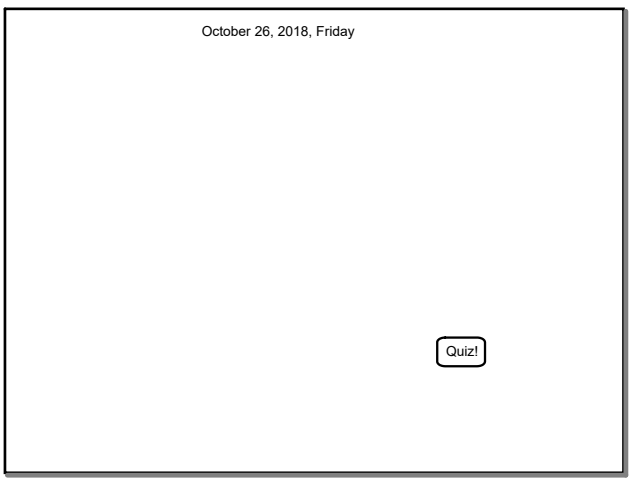
Given the functions $f(x)=5x^2-9x+2$ and $g(x)=x^2+3x-8$ and $h(x)=-2x^3$

12. Find $4f(x)+6g(x)$
13. Find $h(x)+f(x)$
14. Find $-2f(x)+2g(x)$
15. Find $f(3)+g(-4)$

Given the functions: $f(x)=3x^2-7x-$ and $g(x)=-x^2+4x-10$ and $h(x)=6x^3$

16. Find $3f(x)+6h(x)$
17. Find $g(x)-h(x)$
18. Find $h(x)\bullet g(x)$
19. Find $3f(x)+7g(x)$
20. Find $-5g(x)-h(x)$
21. Find $f(2)-f(-1)$
22. Find $3f(x)\bullet h(x)$
23. Find $f(-2)+g(5)$
24. Find $f(-7)\bullet g(6)$

Oct 16-2:41 PM



October 26, 2018, Friday

Quiz!

Oct 16-2:41 PM