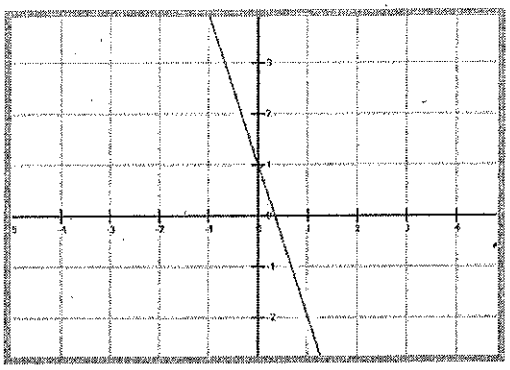
Algebra 1
Function Notation, Day 2

Name: _____
Date: _____ Period: ____

Warm-up: For each, evaluate f(1). Use the function statement to create an ordered pair solution.

1.



f(1) = _____ → (____, ____)

2.

x	0	1	2	3
f(x)	-3	2	-4	1

f(1) = _____ → (____, ____)

3. f(x) = 3x + 13

f(1) = _____ → (____, ____)

When you are given a problem in the form f(1) = (blank), the number 1 represents the Domain (X-value), and your job is to find the corresponding y-value. What if instead you were given f(blank) = 1. In this case, the number 1 represents the Range (y-value) and your job would be to give the x-value that result in this output. Let's try a few:

Using each of the functions ABOVE, determine where f(x) = 1.

1. f(0) = 1 (graph) 2. f(_____) = 1 (table) 3. f(_____) = 1 (function)

(0, 1) when y=1, what is x?

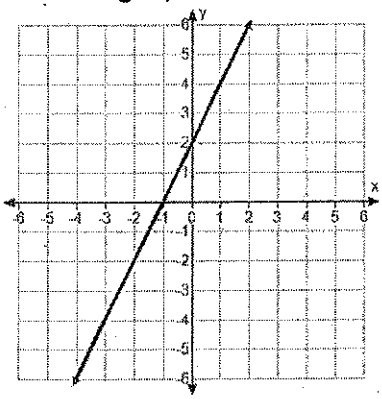
Exercises: Fill in the blank with the correct x-value.

4. If g(x) = 4x – 7, determine when g(x) = 21.
g(_____) = 21

21 = 4x – 7
28 = 4x
$\boxed{x = 7}$

5. If h(x) = 3 – 2x, determine when h(x) = -9.
h(_____) = -9

6. Use the graph to fill in each blank.



a.) f(-4) = _____ c.) f(_____) = -4

b.) f(0) = _____ d.) f(_____) = 0

7. Use the table to fill in each blank.

x	-2	0	3	5
f(x)	5	1	2	0

a.) f(5) = _____ c.) f(_____) = 5

b.) f(0) = _____ d.) f(_____) = 0

ALGEBRA 1
Graded Task

Name: _____
Date: _____

Sample problem: Given the function f(x) = -3x + 7, find

a. f(-5)

$f(-5) = -3(-5) + 7$
$= 15 + 7 = \boxed{22}$

b. the value of x for which f(x) = -5

$-3x + 7 = -5$
$\quad -7 \quad -7$
$-3x = -12$
$\boxed{x = 4}$

Make sure to ✓ substitute w/ parenth.

Part 1: Use $f(x) = \frac{x-1}{4}$, g(x) = 5 – 2x, and $h(x) = x^2 + 2$ to answer each question.

1. f(17) = _____ 2. g(4) = _____ 3. h(2) = _____ 4. f(x) = -6; x = ____ 5. h(-3) = _____

$h(-3) = (-3)^2 + 2$

6. g(x) =11; x = ____ 7. f(x) = 9; x =_____ 8. f(9) = _____ 9. f(2) = _____ 10. g(x)= -17; x=_____

Part 2: Use f(x) = -x + 4, g(x) = 10x – 8, and $h(x) = \frac{x}{3} - 5$ to answer each question.

11. f(2) + g(-3) = _____ 12. f(10) – h(12) = _____ 13. 4g(2) = _____

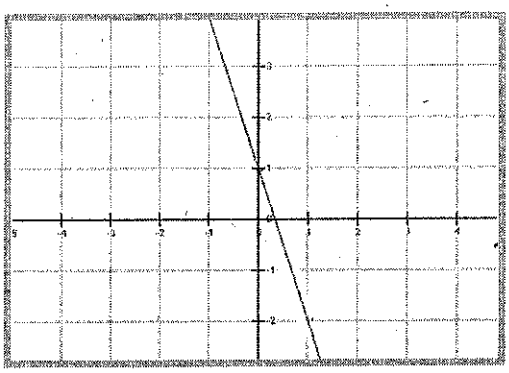
14. h(-3)*f(12) = _____ 15. h(30)*g(-3) = _____ 16. h(6) + 3g(1) – 2f(-5) = _____

Algebra 1
Function Notation, Day 2

Name: Key
Date: _____ Period: ____

Warm-up: For each, evaluate f(1). Use the function statement to create an ordered pair solution.

1.



f(1) = -2 → (1, -2)

2.

x	0	1	2	3
f(x)	-3	2	-4	1

f(1) = 2 → (1, 2)

3. f(x) = 3x + 13 3(1)+13

f(1) = 16 → (1, 16)

When you are given a problem in the form f(1) = (blank), the number 1 represents the Domain (x-value), and your job is to find the corresponding y-value. What if instead you were given f(blank) = 1. In this case, the number 1 represents the Range (y-value) and your job would be to give the x-value that result in this output. Let's try a few:

Using each of the functions ABOVE, determine where f(x) = 1.

* 1. f(0) = 1 (graph) 2. f(0) = 1 (table) 3. f(-4) = 1 (function)

(0, 1) when y=1, what is x? 1 = 3x + 13

Exercises: Fill in the blank with the correct x-value.

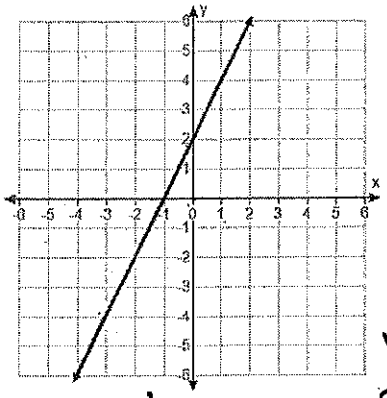
* 4. If g(x) = 4x – 7, determine when g(x) = 21.
g(7) = 21

21 = 4x - 7
28 = 4x
$\boxed{x = 7}$

5. If h(x) = 3 – 2x, determine when h(x) = -9.
h(6) = -9

-9 = 3 - 2x x = 6
-12 = -2x

6. Use the graph to fill in each blank.



looking for x

a.) f(-4) = -6 c.) f(-3) = -4

b.) f(0) = 2 d.) f(-1) = 0

7. Use the table to fill in each blank.

x	-2	0	3	5
f(x)	5	1	2	0

a.) f(5) = -2 c.) f(-2) = 5

b.) f(0) = 5 d.) f(5) = 0

ALGEBRA 1
Graded Task

Name: Key
Date: _____

Sample problem: Given the function f(x) = -3x + 7, find

a. f(-5)

$f(-5) = -3(-5) + 7$
$= 15 + 7 = \boxed{22}$

b. the value of x for which f(x) = -5

$-3x + 7 = -5$
$\quad -7 \quad -7$
$-3x = -12$
$\boxed{x = 4}$

Part 1: Use $f(x) = \frac{x-1}{4}$, g(x) = 5 – 2x, and h(x) = x^2 + 2 to answer each question.

Make sure to substitute w/ parenth.

1. f(17) = 4
2. g(4) = -3
3. h(2) = 6
4. f(x) = -6; x = -23
5. h(-3) = 11

$\frac{17-1}{4} = 4$

$5 - 2(4)$
-3

$2^2 + 2$

$-6 = \frac{x-1}{4}$
$-24 = x - 1$
$-23 = x$

$h(-3) = (-3)^2 + 2$
$9 + 2$
$= 11$

6. g(x) =11; x = -3
7. f(x) = 9; x = 37
8. f(9) = 2
9. f(2) = 1/4
10. g(x)= -17; x= 11

$11 = 5 - 2x$
$6 = -2x$
$x = -3$

4. $9 = \frac{x-1}{4} \cdot 4$
$36 = x - 1$
$37 = x$

$f(9) = \frac{9-1}{4}$
$f(9) = 2$

$f(2) = \frac{2-1}{4}$
$f(2) = \frac{1}{4}$

$-17 = 5 - 2x$
$-22 = -2x$
$x = 11$

Part 2: Use f(x) = -x + 4, g(x) = 10x – 8, and h(x) = $\frac{x}{3}$ – 5 to answer each question.

11. f(2) + g(-3) = -36

$-2 + 4$
$10(-3) - 8$
$2 + -38$

12. f(10) – h(12) = 3

$-10 + 4 - \left(\frac{12}{3} - 5\right)$
$-6 \cancel{- 1(-9)}$
$-6 + 9$

13. 4g(2) = 48

$4(10(2) - 8)$
$4(12)$

14. h(-3)*f(12) = 48

$\left(\frac{-3}{3} - 5\right)(-12 + 4)$
$(-6)(-8)$

15. h(30)*g(-3) = -190

$\left(\frac{30}{3} - 5\right)(10(-3) - 8)$
$(5)(-38)$

16. h(6) + 3g(1) – 2f(-5) = -15

$3(2) - 2(9)$
$-3 + 6 - 18$