

FUNC.a

Date

Period

FUNC.a.1

Given a table or graph, identify the domain.

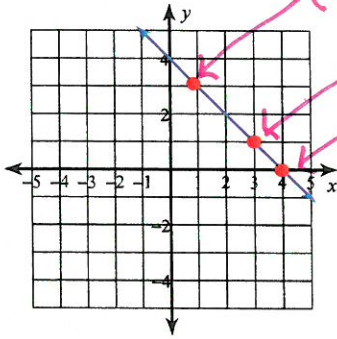
Given the following graph(s), state the Domain of the points identified

REQUIRED WORK:

- ① Label points
- ② Write answer

D: x = _____

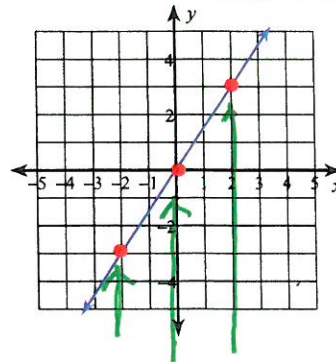
1)



Read the points
X-Coord is the
Domain

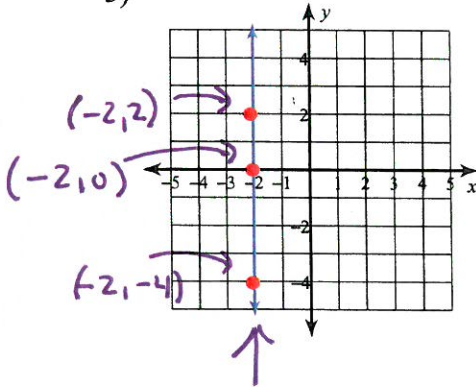
$D: x = 1, 3, 4$

2)



$D: x = -2, 0, 2$

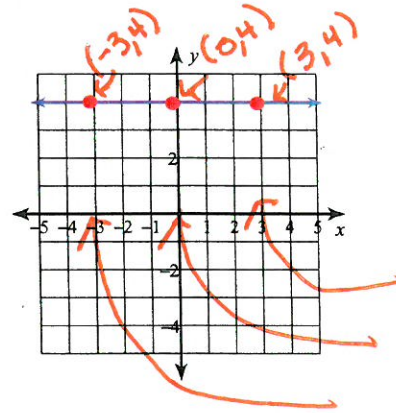
3)



Note: X is always -2 write like this

$D: x = -2$

4)



$D: x = -3, 0, 3$

Note: The domain is a list of x-values. There fore do NOT write duplicate x-values

FUNC.a

Date _____ Period _____

FUNC.a.2

Use function notation to evaluate given domain values.

Evaluate each function for the given domain values using function notation. Clearly show your work. Circle answers.

1) $f(x) = x + 2$;
Find $f(8)$, $f(0)$, $f(-8)$

Show
work
like
this

$$\left\{ \begin{array}{l} f(8) = 8 + 2 = \textcircled{10} \\ f(0) = 0 + 2 = \boxed{2} \\ f(-8) = -8 + 2 = \boxed{-6} \end{array} \right.$$

2) $g(x) = 3x + 5$;
Find $g(5)$, $g(0)$, $g(-5)$

$$g(5) = 3(5) + 5 = \textcircled{20}$$
$$g(0) = 3(0) + 5 = \textcircled{5}$$
$$g(-5) = 3(-5) + 5 = \boxed{-10}$$

FUNC.a

FUNC.a.3

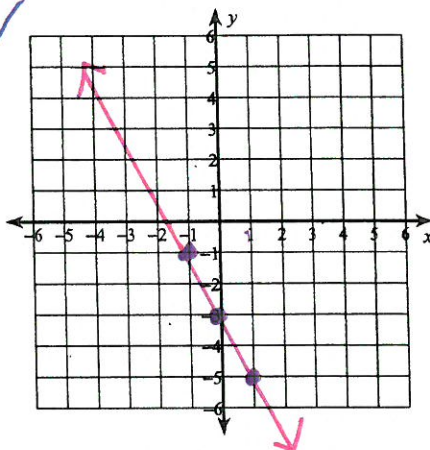
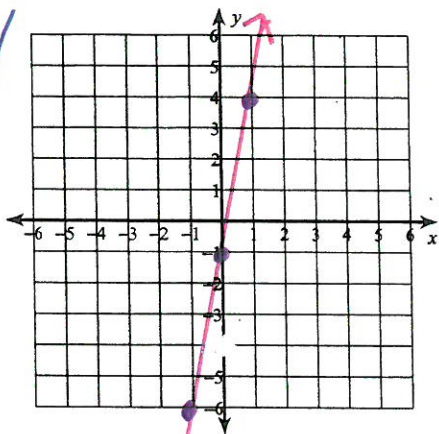
Graph a function, provided in function notation, with a given domain.

For the following functions, graph the function with the domain -1, 0, 1. Provide a supporting table of values.

$x = -1, 0, 1$

1) $f(x) = 5x - 1$

2) $f(x) = -2x - 3$



$y = 5x - 1$

$y = -2x - 3$

x	y
-1	-6
0	-1
1	4

Mental work
 $y = 5(-1) - 1 = -6$
 $y = 5(0) - 1 = -1$
 $y = 5(1) - 1 = 4$

x	y
-1	-1
0	-3
1	-5

Mental work
 $y = -2(-1) - 3 = -1$
 $y = -2(0) - 3 = -3$
 $y = -2(1) - 3 = -5$

NOTES:

Domain are x-values
 Range are y-values
 $f(x)$ means y

FUNC.a

Date _____ Period _____

FUNC.a.4

Given a table of values, describe the function using function notation.

$y = mx + b$ ^{or}
 $f(x) = mx + b$
 Where:
 $m =$ slope; rate of change
 $b =$ y intercept; starting point

For each relation given:

- a) Create a function table (GREEN)
- b) Write the rule that describes the function using function notation
- c) And clearly explain how you developed your rule.

1) (-2,1), (-1,2), (0,3), (1,4), (2,5)

2) (-2,10), (-1,5), (0,0), (1,-5), (2,-10)

x	y
-2	1
-1	2
0	3
1	4
2	5

1 is the rate of change.

The starting point is where "x" IS ZERO (0,3)

$$f(x) = x + 3$$

NOTE: implied 1

x	y
-2	10
-1	5
0	0
1	-5
2	-10

-5 is the rate of change

The starting point is "0"

$$f(x) = -5x$$

NOTE: implied "0"

3) (-2,-14), (-1,-12), (0,-10), (1,-8), (2,-6)

x	y
-2	-14
-1	-12
0	-10
1	-8
2	-6

2 is the rate of change

The starting point is "-10"

$$f(x) = 2x - 10$$

TIP:
 Easy way to show work (check 3 x-values)

$f(1) = 2(1) - 10 = -8$
 $f(2) = 2(2) - 10 = -6$
 $f(0) = 2(0) - 10 = -10$
******always check zero!**