

IM2 Unit 1 Study Guide: Introduction to Functions and Linear Functions

Graph the functions using x-y tables and name them. (choose your own x-values)

x					
y					

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

2.) $f(x) = x^2 + 3x - 1$

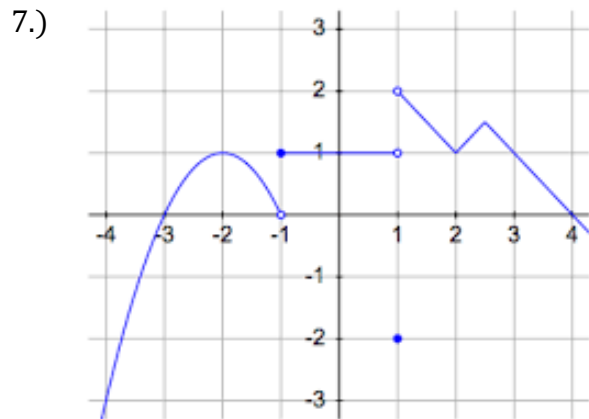
3.) $f(x) = |x + 1| - 2$

4.) $f(x) = 3^x + 2$

5.) $f(x) = -2x + 3$

6.) $f(x) = 2x^2$

Name the type of function, express the domain and range of each relation, and evaluate.



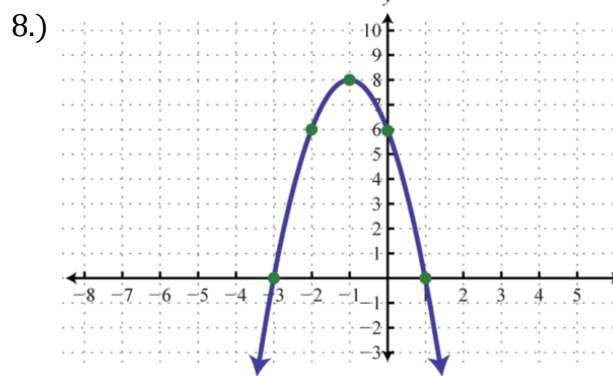
Name: _____

Domain: _____

Range: _____

$f(-2) =$ _____ $f(1) =$ _____

$f(-1) =$ _____ $f(-4) =$ _____



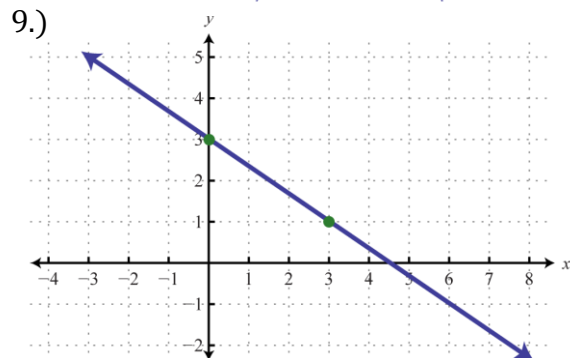
Name: _____

Domain: _____

Range: _____

$f(-2) =$ _____ $f(0) =$ _____

$f(-1) =$ _____ $f(-3) =$ _____



Name: _____

Domain: _____

Range: _____

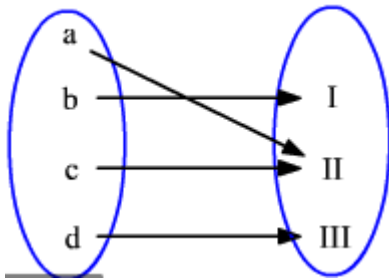
$f(0) =$ _____ $f(3) =$ _____

$f(-3) =$ _____ $f(6) =$ _____

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Name the domain and range of the following and specify whether it is a function or relation.

10.)



Determine the slope.

13.) $(-6, -1)$ & $(-1, 4)$

16.) $-3x - 5y = 10$

Graph the lines.

17.) $y = -\frac{4}{5}x + 3$

18.) $-2x + 5y = 10$

19.) $y - 1 = -2(x + 4)$

Graph the piecewise functions and evaluate.

$$20.) f(x) = \begin{cases} -2x & \text{if } x < -1 \\ 3x - 1 & \text{if } -1 \leq x \leq 2 \\ -\frac{1}{2}x & \text{if } x > 2 \end{cases}$$

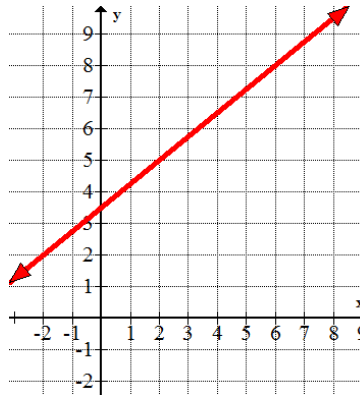
$f(6) =$ _____

$f(-4) =$ _____

$f(-1) =$ _____

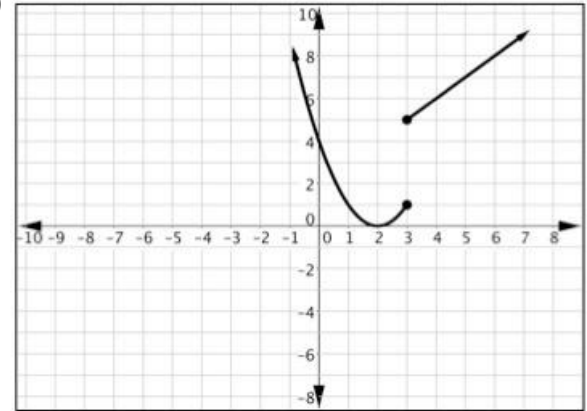
11.)

Input	Output
3	0
4	7
5	10
4	14
10	25



14.)

12.)



15.)

x	2	4	6	8
y	22	32	42	52

