Foundations for College Algebra

Fall 2017

Quiz #6

Name: Key

1.) State the *Domain* and *Range* of the following set:
$S = \{(6,4), (2,-7), (-3,5), (4,6), (-2,5), (7,3)\}$

Domain: $\{6, 2, -3, 4, -2, 7\}$

Range: $\{4, -7, 5, 6, 3\}$

2.) Determine if the following *Relation* is a *Function (explain your reasoning)* :
$T = \{(-6,-4), (-4,-4), (1,-4), (2,5)\}$

Domain: $\{-6, -4, 1, 2\}$ No repeated elements, so yes T is a function.

3.) Describe the "mapping" notation of the following function and list three ordered pairs:

$f : x \to 3x - 5$

x sends the input into the rule $(3x - 5)$ to produce an output.

$x = 2 \to 1$

$x = (-1) \to -8$

$x = 0 \to -5$

$(2, 1)$
$(-1, -8)$
$(0, -5)$

4.) Given the following function: $f(x) = 4 - 5x - x^2$, evaluate $f(-3)$.

$f(-3) = 4 - 5(-3) - (-3)^2$
$= 4 + 15 - 9$
$= 19 - 9$
$= 10$

$(-3, 10)$