MCR 3U
Chapter 3

NAME Erin H
DATE

Practice Test: Review of functions.

Instructions: Write complete solutions (show the steps) to receive full marks.

1.

a) If $g(x)=\frac{2x-3}{4-x}$, find $g(-3)$

$g(-3)=\frac{2(-3)-3}{4-(-3)}=\frac{-6-3}{4+3}=\frac{-9}{7}$ $g(-3)=-\frac{9}{7}$

b) If $g(x)=4x^2-5x-10$, find $g(y-2)$

$g(y-2)=4y^2-21y+16$

$g(y-2)=4(y-2)^2-5(y-2)-10=4(y^2-4y+4)-5y$

2. State the domain and range for each of the following.

a) $y=3(x-1)^2-\frac{2}{7}$

Domain $\{x\in\mathbb{R}\}$
Range $\{y\in\mathbb{R}/y\geq-\frac{2}{7}\}$

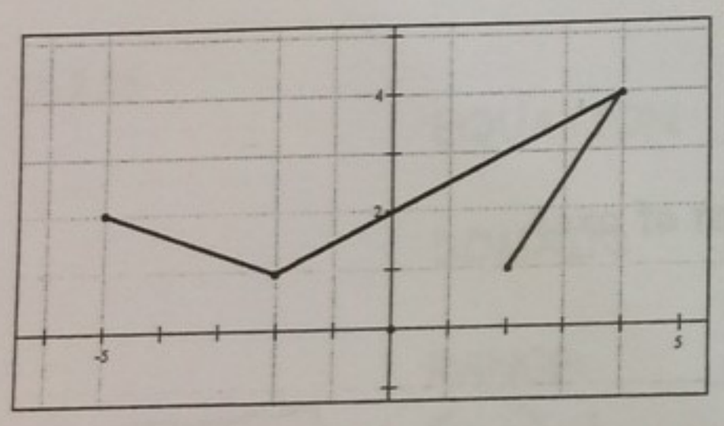
b) $y=-\sqrt{x-4}$

Domain $\{x\in\mathbb{R}/x\leq 4\}$
Range $\{y\in\mathbb{R}/y\geq 0\}$

c) $y=\frac{1}{x}$

Domain $\{x\neq 0\}$
Range $\{y\neq 0\}$

Determine if the relation below is a function. Justify your answer. Determine the domain and range.



Domain $\{x\in\mathbb{R}/-5\leq x\leq 4\}$
Range $\{y\in\mathbb{R}/1\leq y\leq 4\}$

No it is not a function because for every x-value there is not an individual y-value. It does not pass the vertical line test.

TEST