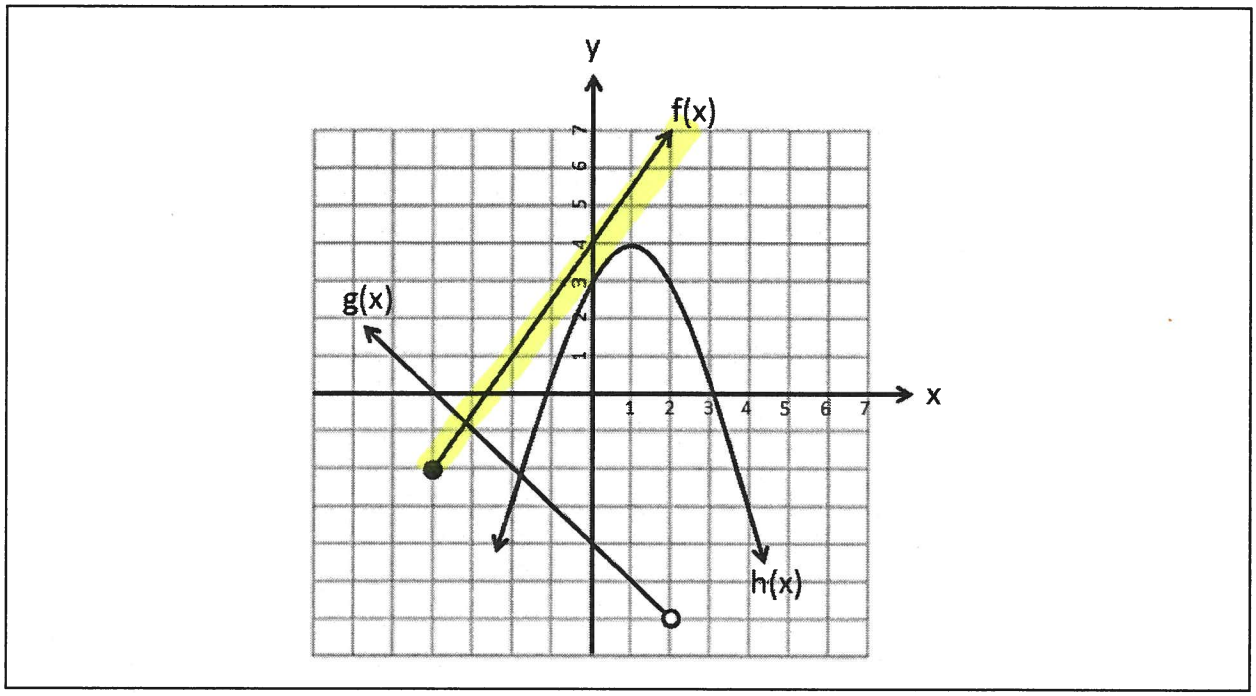
KEY

First Name:_____ Last Name:_____

L29 – FQ – 6.3 Domain and Range

Use the following information to answer Q1-Q4:



Q1: How many of the lines in the graph above are linear?

*(Record your **one digit** answer in the Numerical Response boxes below)*

2			

Both f(x) and g(x) are linear (aka "straight lines")

Q2: Using interval notation, which best describes the domain of the "f(x)" equation?

a. (-4,∞)
b. [-4,∞)
c. (-2,∞)
d. [-2,∞)

x

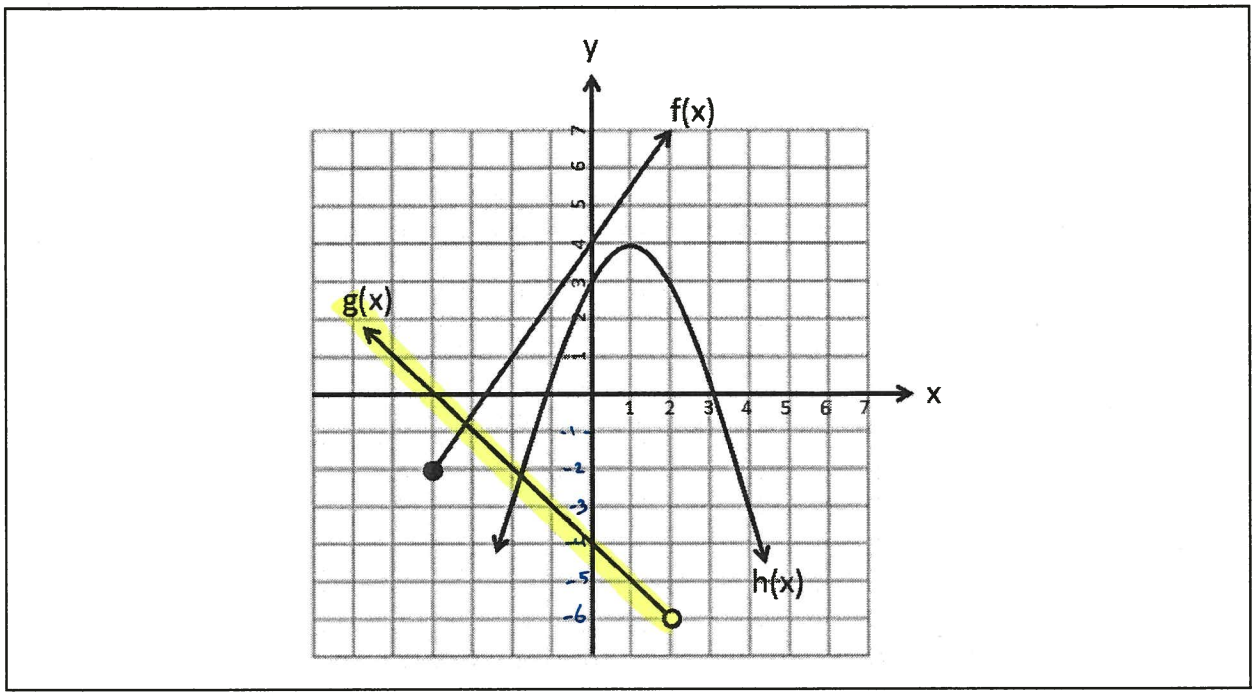
[-4,∞)

[: Can equal

) : Cannot equal, but can get close

KEY

Use the following information to answer Q1-Q4:



Q3: The ***domain*** for the "g(x)" line can be written as $\{x|x < \boldsymbol{a}, x \in R\}$, and the ***range*** can be written as $\{y|y > \boldsymbol{b}, y \in R\}$, where ***a*** and ***b*** are ___ and ___.

*(Record your **two digit** answer in the Numerical Response boxes below)*

2	6		

$\{x|-\infty < x < 2, x \in \mathbb{R}\}$ or $\{x|x < 2, x \in \mathbb{R}\}$

$a = 2$

$\{y|-6 < y < \infty, y \in \mathbb{R}\}$ or $\{y|y > -6, y \in \mathbb{R}\}$

$b = 6$

Q4: *(Long Answer)* Write the domain and range of the "h(x)" line using Set Notation. *(2 marks)*

Domain: $\{x|-\infty < x < \infty, x \in \mathbb{R}\}$ or $\{x \in \mathbb{R}\}$

Range: $\{y|-\infty < y \leq 4, y \in \mathbb{R}\}$ or $\{y|y \leq 4, y \in \mathbb{R}\}$

MARKING:

Beginning	0.0 – 2.0
Progressing	2.5 – 3.0
Competent	3.5 – 4.5
Exemplary	5.0

Extra Time? Try factoring the following: $2x^3 - 50x$

$2x(x^2 - 25)$

$2x(x+5)(x-5)$