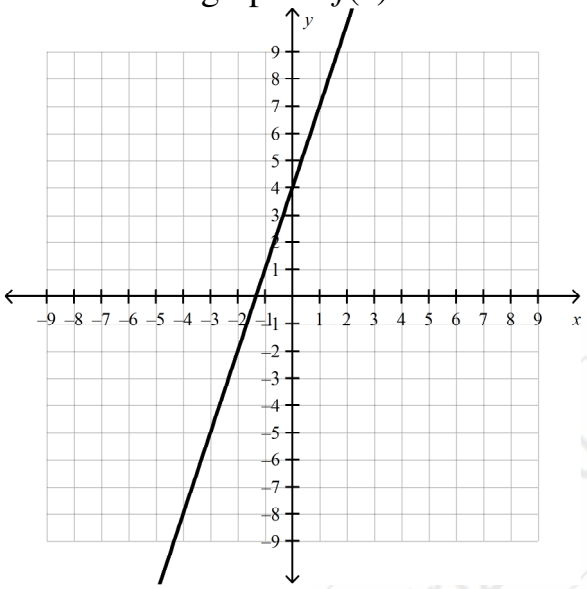
Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Function Reflections

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Below is the graph of $f(x)$:



What is the correct equation for the transformation of a reflection over the x-axis?

a. $g(x) = -3x - 4$
b. $g(x) = 3x - 4$
c. $g(x) = 3x + 4$
d. $g(x) = -3x + 4$

____ 2. What is the correct equation for the transformation of a reflection over the y-axis for the function $f(x) = -2x - 5$?

a. $g(x) = -2x + 5$
b. $g(x) = 2x - 5$
c. $g(x) = 2x + 5$
d. $g(x) = -2x - 5$

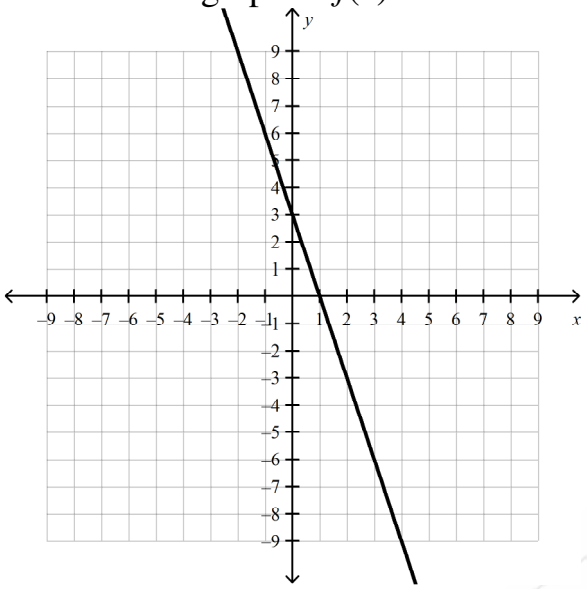
____ 3. What is the correct equation for the transformation of a reflection over the x-axis for the function $f(x) = -2x + 5$?

a. $g(x) = 2x + 5$
b. $g(x) = -2x - 5$
c. $g(x) = -2x + 5$
d. $g(x) = 2x - 5$

____ 4. What is the correct equation for the transformation of a reflection over the y-axis for the function $f(x) = -3x - 4$?

a. $g(x) = -3x - 4$
b. $g(x) = 3x + 4$
c. $g(x) = 3x - 4$
d. $g(x) = -3x + 4$

____ 5. Below is the graph of $f(x)$:



What is the correct equation for the transformation of a reflection over the y-axis?

a. $g(x) = 3x + 3$
b. $g(x) = 3x - 3$
c. $g(x) = -3x + 3$
d. $g(x) = -3x - 3$

____ 6. What is the correct equation for the transformation of a reflection over the x-axis for the function with locations at (–1, –3) and (–2, 0) on a graph?

a. $f(x) = 3x - 6$
b. $f(x) = 3x + 6$
c. $f(x) = -3x + 6$
d. $f(x) = -3x - 6$

____ 7. What is the correct equation for the transformation of a reflection over the x-axis for the function with locations at (–2, –2) and (–3, 0) on a graph?

a. $f(x) = 2x - 6$
b. $f(x) = -2x + 6$
c. $f(x) = 2x + 6$
d. $f(x) = -2x - 6$

____ 8. What is the correct equation for the transformation of a reflection over the x-axis for the function with locations at (4, 11) and (7, 23) on a graph?

a. $f(x) = -4x - 5$
b. $f(x) = 4x - 5$
c. $f(x) = 4x + 5$
d. $f(x) = -4x + 5$

Multiple Response
Identify one or more choices that best complete the statement or answer the question.

____ 9. Which three of the following show $g(x)$ as a reflection of $f(x)$ over the x-axis?
a. $f(x) = 8x^2 - 3x + 4$ and $g(x) = 8x^2 + 3x + 4$
b. $f(x) = (x-6)^2 + 1$ and $g(x) = -(x-6)^2 - 1$
c. $f(x) = (x-6)^2 + 1$ and $g(x) = (-x-6)^2 + 1$
d. $f(x) = (-x+4)(-x-4)$ and $g(x) = (x-4)(-x-4)$
e. $f(x) = 8x^2 - 3x + 4$ and $g(x) = -8x^2 + 3x - 4$
f. $f(x) = (-x+4)(-x-4)$ and $g(x) = (x+4)(x-4)$

____ 10. Which three of the following show $g(x)$ as a reflection of $f(x)$ over the y-axis?
a. $f(x) = -2x^2 + 5x + 3$ and $g(x) = 2x^2 - 5x - 3$
b. $f(x) = -(x+2)^2 + 1$ and $g(x) = (x+2)^2 - 1$
c. $f(x) = -(x+2)^2 + 1$ and $g(x) = -(-x+2)^2 + 1$
d. $f(x) = (-x+1)(x-4)$ and $g(x) = (x+1)(-x-4)$
e. $f(x) = (-x+1)(x-4)$ and $g(x) = (x-1)(x-4)$
f. $f(x) = -2x^2 + 5x + 3$ and $g(x) = -2x^2 - 5x + 3$

____ 11. Which three of the following show $g(x)$ as a reflection of $f(x)$ over the x-axis?
a. $f(x) = -2x^2 + 3x + 1$ and $g(x) = -2x^2 - 3x + 1$
b. $f(x) = -(x+7)^2 - 8$ and $g(x) = (x+7)^2 + 8$
c. $f(x) = (x-2)(x-8)$ and $g(x) = (-x+2)(x-8)$
d. $f(x) = (x-2)(x-8)$ and $g(x) = (-x-2)(-x-8)$
e. $f(x) = -(x+7)^2 - 8$ and $g(x) = -(-x+7)^2 - 8$
f. $f(x) = -2x^2 + 3x + 1$ and $g(x) = 2x^2 - 3x - 1$

____ 12. Which three of the following show $g(x)$ as a reflection of $f(x)$ over the y-axis?
a. $f(x) = -(x+9)^2 + 4$ and $g(x) = (x+9)^2 - 4$
b. $f(x) = (-x+9)(x-7)$ and $g(x) = (x-9)(x-7)$
c. $f(x) = 7x^2 - 8x - 2$ and $g(x) = 7x^2 + 8x - 2$
d. $f(x) = (-x+9)(x-7)$ and $g(x) = (x+9)(-x-7)$
e. $f(x) = -(x+9)^2 + 4$ and $g(x) = -(-x+9)^2 + 4$
f. $f(x) = 7x^2 - 8x - 2$ and $g(x) = -7x^2 + 8x + 2$

Function Reflections
Answer Section

MULTIPLE CHOICE

1. ANS: A PTS: 1
2. ANS: B PTS: 1
3. ANS: D PTS: 1
4. ANS: C PTS: 1
5. ANS: A PTS: 1
6. ANS: B PTS: 1
7. ANS: C PTS: 1
8. ANS: D PTS: 1

MULTIPLE RESPONSE

9. ANS: B, D, E PTS: 1
10. ANS: C, D, F PTS: 1
11. ANS: B, C, F PTS: 1
12. ANS: C, D, E PTS: 1