Name: _____ Date: _____

Function Translations Review

1. Submit an equation that will move the graph of the function $y=x^2$ right 4 units.

2. The equation $y = (x+3)^2 - 2$ moves the parent function $y = x^2$ right 3 units and down 2 units.

   True or False

3. Submit an equation that will move the graph of the function $y = x^2$ down 7 units.

4. The equation $y = (x-8)^2 + 5$ moves the parent function $y = x^2$ right 8 units and down 5 units.

   True or False

5. Submit an equation that will move the graph of the function $y=x^2$ left 2 units and up 6 units.

6. Which equation will shift the graph of $y = x^2$ left 5 units and up 6 units?

   a. $y = (x+6)^2-5$

   b. $y = (x+5)^2-6$

   c. $y = (x+5)^2+6$

   d. $y = (x-5)^2+6$

7. Submit an equation that will move the graph of the function $y=x^2$ right 3 units up 2 units.

8. Which equation will shift the graph of $y = x^2$ right 8 units and down 4 units?

   a. $y = (x+8)^2-4$

   b. $y = (x+4)^2-8$

   c. $y = (x-4)^2+8$

   d. $y = (x-8)^2-4$

Name: _____ Date: _____

9. Submit an equation that will move the graph of the function $y=x^2$ left 7 units and down 3 units.

10. Which equation will shift the graph of $y = x^2$ up 9 units?

    a. $y = (x+9)^2$

    b. $y = x^2-9$

    c. $y = x^2+9$

    d. $y = (x-9)^2$

11. Submit an equation that will move the graph of the function y=log(x) right 4 units and up 6 units.

12. The equation y = log(x-3) + 9 moves the parent function y = log(x) right 3 units and up 9 units.

    True or False

13. Submit an equation that will move the vertex of the function $y=x^2$ to the point (-3,1).

14. The equation $y = (x+3)^2 – 2$ moves the vertex of the parent function $y = x^2$ to:

    a. (3,2)

    b. (-3, -2)

    c. (-2, 3)

    d. (2, -3)

15. Submit an equation that will move the graph of the function y=abs(x) left 2 units and up 5 units.

16. The equation y = abs(x - 4) - 5 moves the parent function y = abs(x) right 5 units and down 4 units.

    True or False

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Check for Understanding:

1. How does the graph of $y = x^2$ differ from the graph of $y = x^2 - 4$?

   A The graph of $y = x^2 - 4$ is wider than the graph of $y = x^2$.

   B The graph of $y = x^2 - 4$ is shifted to the left of the graph of $y = x^2$.

   C The graph of $y = x^2 - 4$ is shifted down from the graph of $y = x^2$.

   D The graph of $y = x^2 - 4$ is narrower than the graph of $y = x^2$.

2. How would the graph of the function $y = x^2 + 4$ be affected if the function were changed to $y = x^2 + 1$?

   F The graph would shift 3 units up.

   G The graph would shift 3 units down.

   H The graph would shift 3 units to the right.

   J The graph would shift 3 units to the left.

3. What is the effect on the graph of the equation $y = -4x^2$ when the equation is changed to $y = 4x^2$?

   A The graph of $y = 4x^2$ is translated 8 units down.

   B The graph of $y = 4x^2$ is a reflection of $y = -4x^2$ across the x-axis.

   C The graph of $y = 4x^2$ is translated 8 units up.

   D The graph of $y = 4x^2$ is a reflection of $y = -4x^2$ across the y-axis.