

**Algebra 2A**  
**Practice Quiz on 2-6 & 2-7**

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Hr: \_\_\_\_\_

**SHOW ALL WORK**

**For #1-8, identify all transformations from the parent function  $f(x) = x^2$  to  $g$ .**

1.  $g(x) = \frac{1}{2}x^2$

1. \_\_\_\_\_

2.  $g(x) = (x - 5)^2$

2. \_\_\_\_\_

3.  $g(x) = (-x)^2$

3. \_\_\_\_\_

4.  $g(x) = -(5x)^2$

4. \_\_\_\_\_

5.  $g(x) = x^2 + 10$

5. \_\_\_\_\_

6.  $g(x) = x^2 - 4$

6. \_\_\_\_\_

7.  $g(x) = 2(x + 1)^2$

7. \_\_\_\_\_

8.  $g(x) = (0.3x)^2$

8. \_\_\_\_\_

**For # 9-16, write a function for the graph described.**

9. the graph of  $f(x) = x^2$  translated 15 units up

9. \_\_\_\_\_

10. the graph of  $f(x) = |x|$  horizontally stretched by a factor of 10

10. \_\_\_\_\_

11. the graph of  $f(x) = \sqrt{x}$  reflected across the y axis

11. \_\_\_\_\_

12. the graph of  $f(x) = x^3$  reflected across the x axis

12. \_\_\_\_\_

13. the graph of  $f(x) = x^2$  vertically stretched by a factor of 6.

13. \_\_\_\_\_

14. the graph of  $f(x) = x^2$  translated 4 units to the right.

14. \_\_\_\_\_

15. the graph of  $f(x) = x^4$  translated 10 units down.

15. \_\_\_\_\_

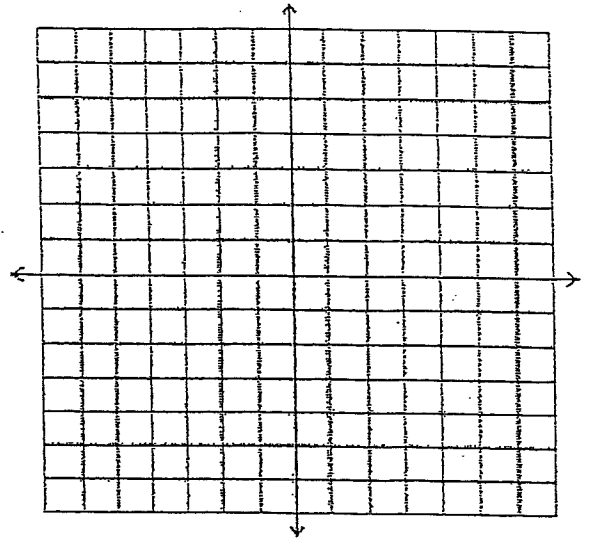
16. the graph of  $f(x) = |x|$  horizontally translated 3 units to the right.

16. \_\_\_\_\_

For #17-18, graph both the equation and its parent function  $f(x) = |x|$ .

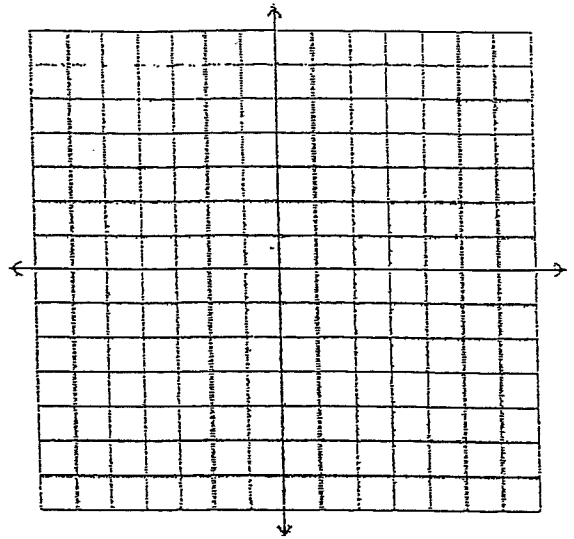
17.  $y = |x - 3| + 1$

17.



18.  $y = -\frac{1}{2}|x|$

18.



For #19-20, identify a.) the vertex and b.) the axis of symmetry.

19.  $y = 2|x - 3| + 4$

19. a.) \_\_\_\_\_

b.) \_\_\_\_\_

20.  $y = \frac{1}{3}|x|$

20. a.) \_\_\_\_\_

b.) \_\_\_\_\_

