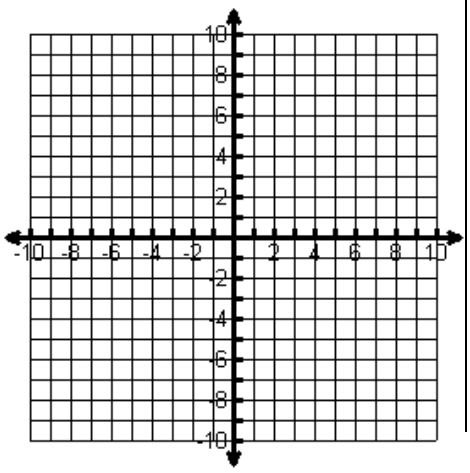
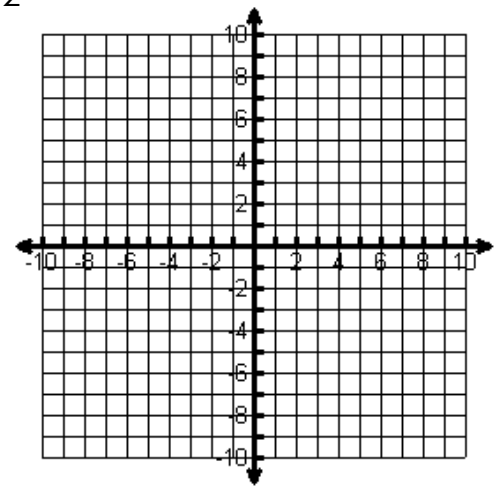
Name _____ **Date** _____

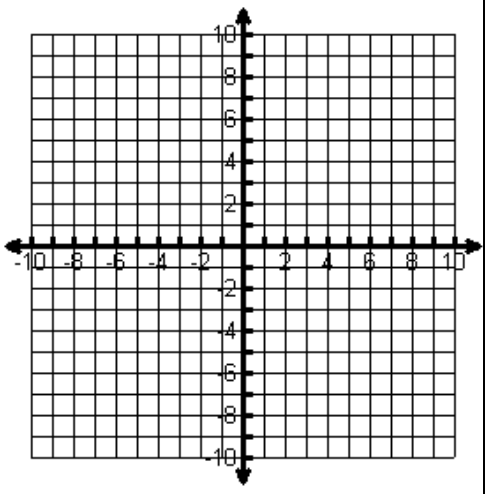
1. $f(x) = \sqrt{-x} - 1$



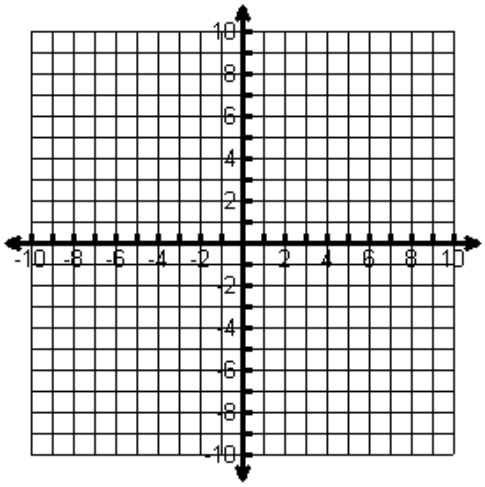
2. $f(x) = -\sqrt[3]{x} + 2$



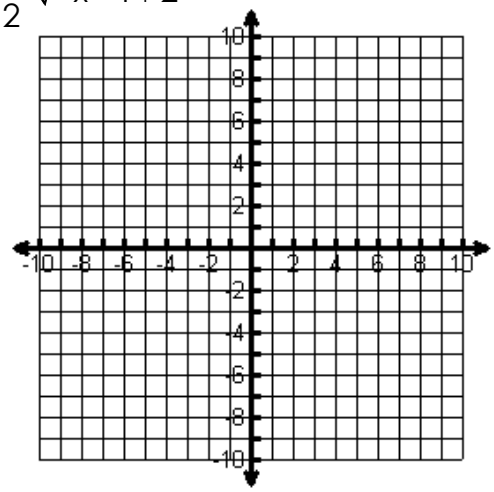
3. $f(x) = -2\sqrt{x+1} - 3$



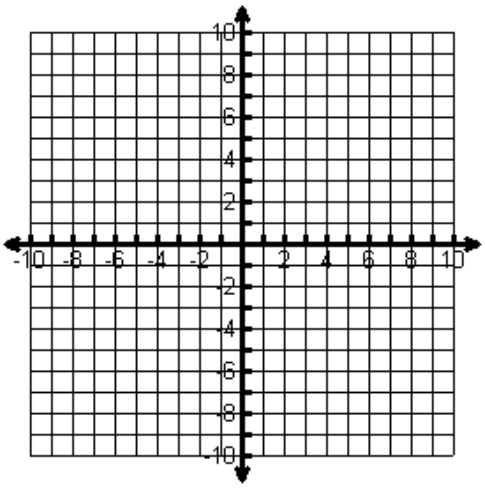
4. $f(x) = -\sqrt[3]{x-1} - 3$



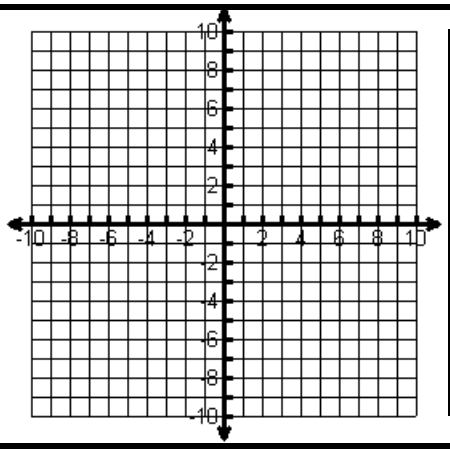
5. $f(x) = \frac{-1}{2}\sqrt{-x-1} + 2$



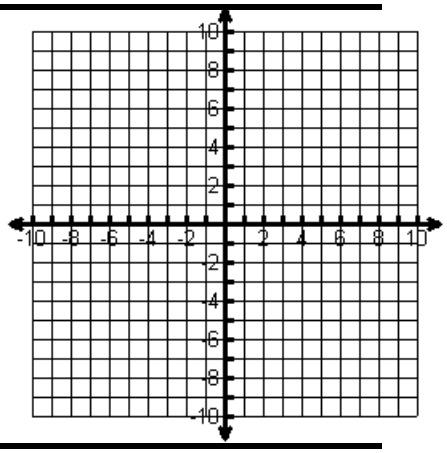
6. $f(x) = 2\sqrt[3]{-x+2} + 1$



7. $f(x) = -\sqrt{x} + 1$



8. $f(x) = -\sqrt[3]{-x} + 1$



Using $f(x) = \sqrt{x}$ as a guide, describe the transformation.

9. $f(x) = \sqrt{3(x+5)}$

10. $f(x) = \frac{1}{4}\sqrt{-x}$

11. $f(x) = \sqrt{x+4} - 1$

12. $f(x) = -4\sqrt{x} + 1$

13. $f(x) = 3\sqrt{-x} + 2$

14. $f(x) = \sqrt{\frac{1}{3}(x+2)}$

Use the description to write the square-root function g.

15. The parent function $f(x) = \sqrt{x}$ is compressed vertically by a factor of 1/3 and then translated 3 units left.

16. The parent function $f(x) = \sqrt{x}$ is reflected across the y-axis, stretched horizontally by a factor of 6, and then translated 2 units right

17. The parent function $f(x) = \sqrt{x}$ is reflected across the x-axis and then translated 1 unit left and 4 units down

18. The parent function $f(x) = \sqrt{x}$ is reflected across the y-axis, vertically stretched by a factor of 7, and then translated up 5 units