Algebra 2 2016-17 (NO CALCULATOR) Name________________________________

Test Review - Radicals Graphing

Date________________ Period____

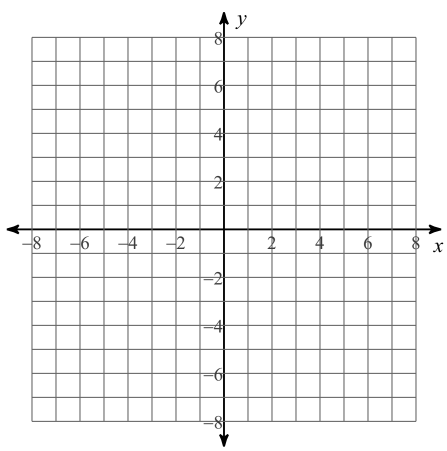
1) Describe the effect on the graph of $f(x) = \sqrt{x+3}$ when the equation is changed to $g(x) = \sqrt{x-6} - 3$?

A) The function f(x) is shifted 3 units to the left and 6 units up to become g(x).
B) The function f(x) is shifted 9 units to the right and 3 units down to become g(x).
C) The function f(x) is shifted 9 units to the left and 3 units down to become g(x).
D) The function f(x) is shifted 3 units to the right and 6 units up to become g(x).

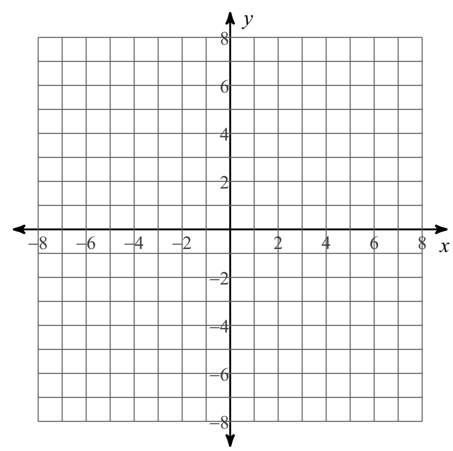
2) Which of the following is a reasonable interval for the range of the function $f(x) = -\frac{1}{2}\sqrt{x-1} + 2$?

List four x,y coordinates, Identify the domain and range of each. Then sketch the graph.

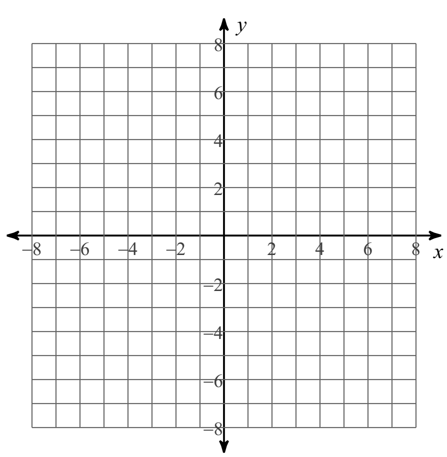
3) $y = \sqrt{x+6}$



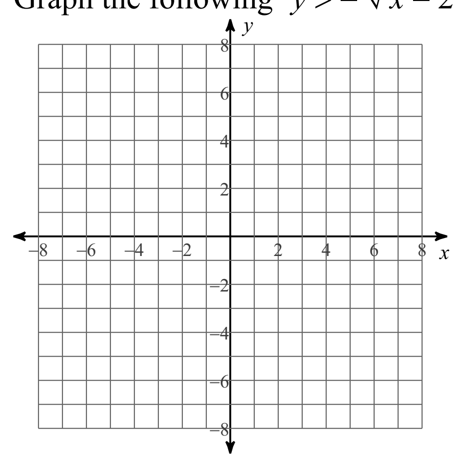
4) $y = -3\sqrt{x-2} + 2$



5) $y = 3\sqrt{x+1} - 1$

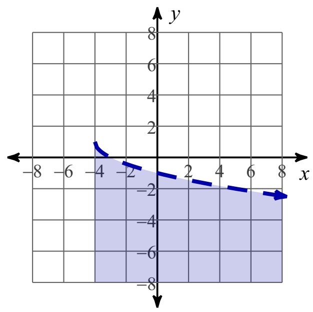


6) Graph the following $y > -\sqrt{x-2} + 1$

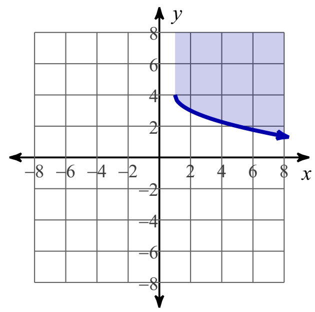


7) Which of the following represents the correct solution set for $y < -\sqrt{x-1} - 4$

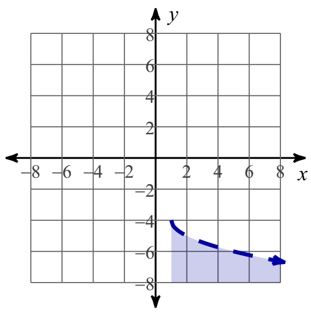
A)



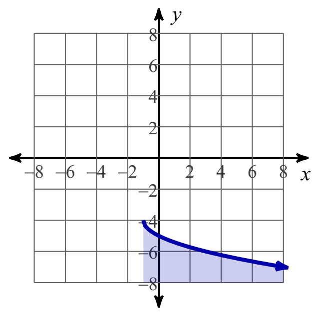
B)



C)



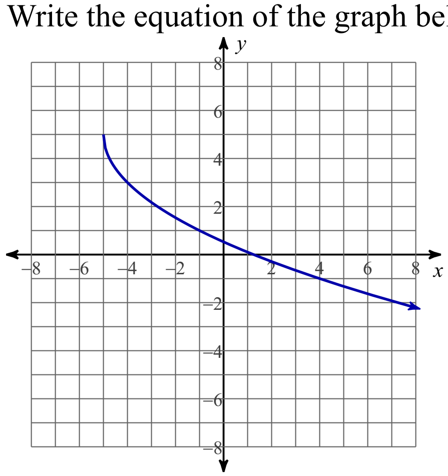
D)



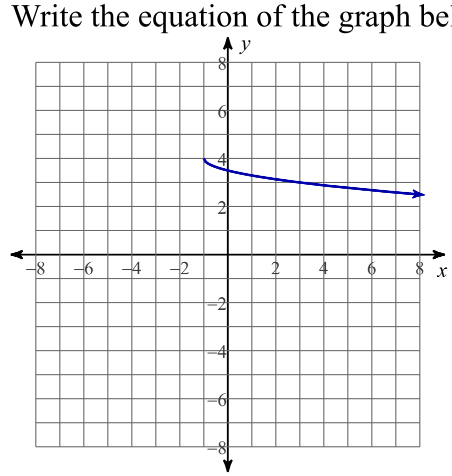
8) The parent function $\sqrt{x}$ is stretched vertically by a factor of 4, reflected across the x-axis, and translated right 4 units and down 2 units. Write the square-root function g(x) for this transformation.

9) The parent function $\sqrt{x}$ is compressed vertically by a factor of 1/4, reflected across the y-axis, and translated up 5 units. Write the square-root function g(x) for this transformation.

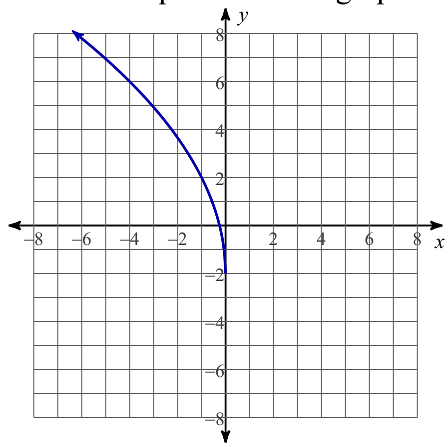
10) Write the equation of the graph below



11) Write the equation of the graph below

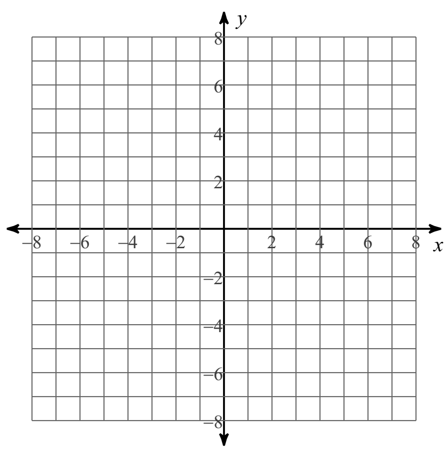


12) Write the equation of the graph below

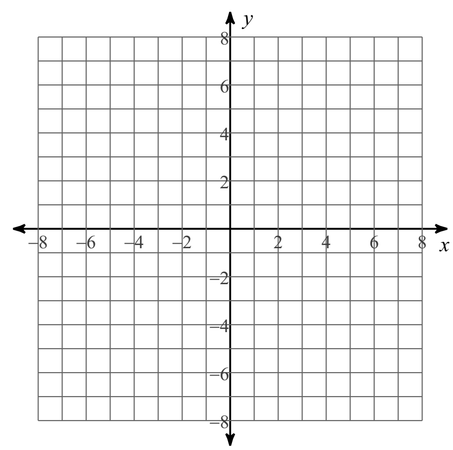


Sketch the graph of each function.

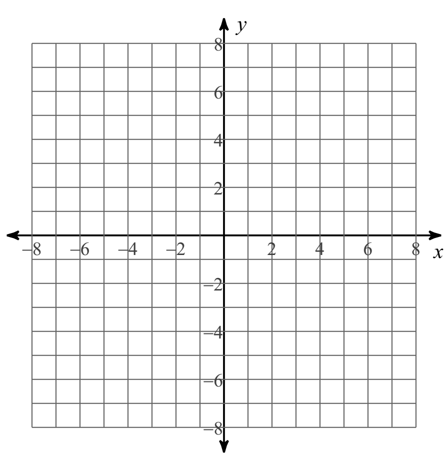
13) $y = \sqrt[3]{x + 5} - 1$



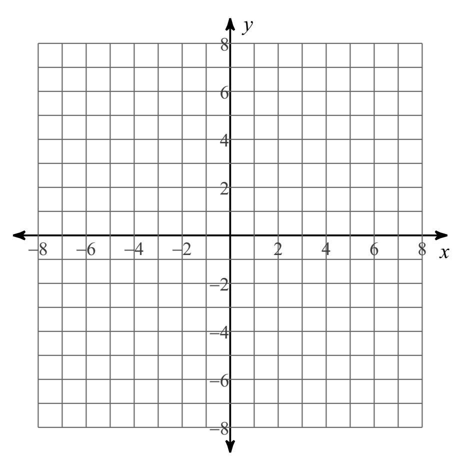
14) $y = \sqrt[3]{x + 4}$



15) $y = 3\sqrt[3]{x + 5}$



16) $y = -2\sqrt[3]{x + 3}$



  Made with Infinite Algebra 2.

Algebra 2 2016-17 (NO CALCULATOR) Name________________________

Test Review - Radicals Graphing

Date________________ Period____

1) Describe the effect on the graph of $f(x) = \sqrt{x + 3}$ when the equation is changed to $g(x) = \sqrt{x - 6} - 3$?

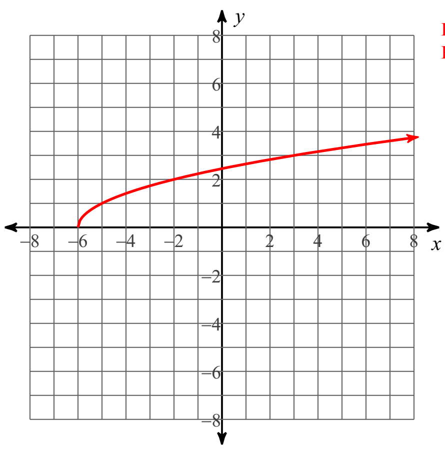
A) The function f(x) is shifted 3 units to the left and 6 units up to become g(x).
*B) The function f(x) is shifted 9 units to the right and 3 units down to become g(x).
C) The function f(x) is shifted 9 units to the left and 3 units down to become g(x).
D) The function f(x) is shifted 3 units to the right and 6 units up to become g(x).

2) Which of the following is a reasonable interval for the range of the function $f(x) = -\frac{1}{2}\sqrt{x - 1} + 2$?

$(-\infty, 2]$

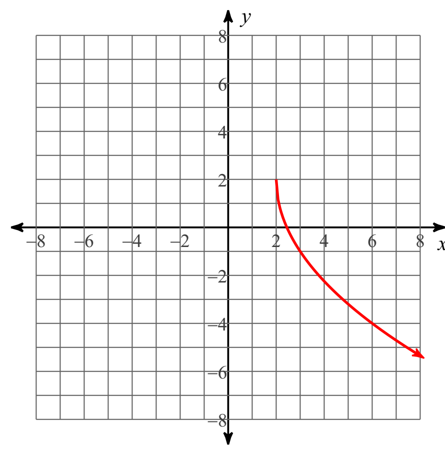
List four x,y coordinates, Identify the domain and range of each. Then sketch the graph.

3) $y = \sqrt{x + 6}$



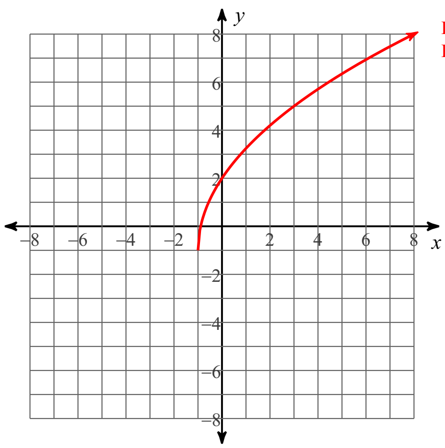
Domain: $x \geq -6$
Range: $y \geq 0$

4) $y = -3\sqrt{x - 2} + 2$



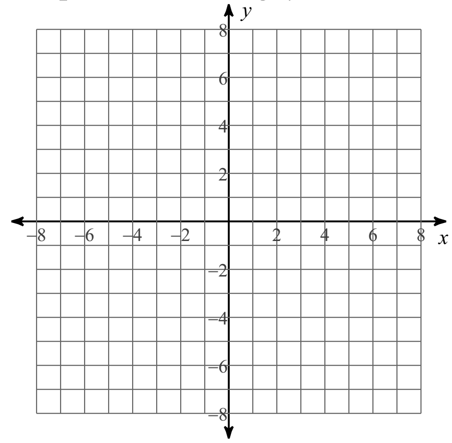
Domain: $x \geq 2$
Range: $y \leq 2$

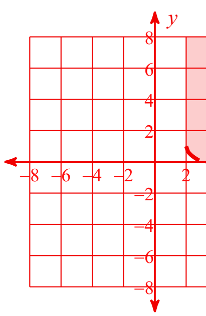
5) $y = 3\sqrt{x + 1} - 1$



Domain: $x \geq -1$
Range: $y \geq -1$

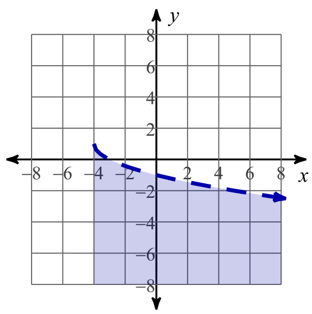
6) Graph the following $y > -\sqrt{x - 2} + 1$



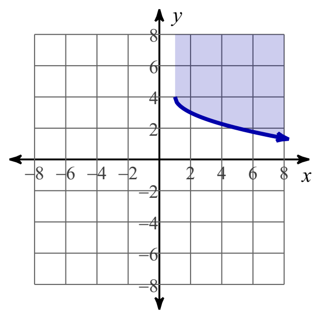


7) Which of the following represents the correct solution set for $y < -\sqrt{x-1} - 4$

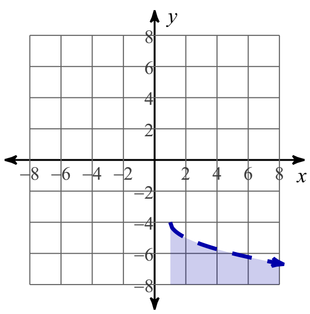
A)



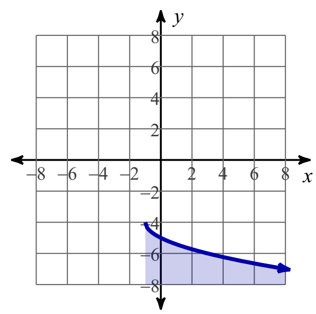
B)



*C)



D)



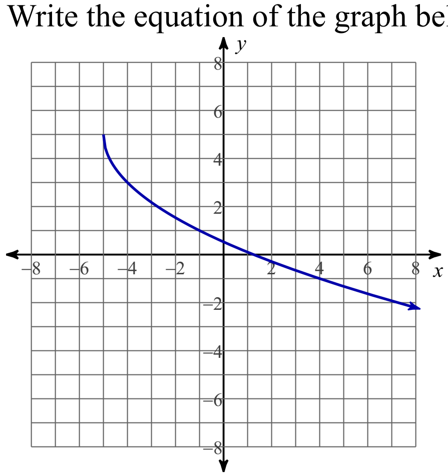
8) The parent function $\sqrt{x}$ is stretched vertically by a factor of 4, reflected across the x-axis, and translated right 4 units and down 2 units. Write the square-root function g(x) for this transformation.

$-4\sqrt{x-4} - 2$

9) The parent function $\sqrt{x}$ is compressed vertically by a factor of 1/4, reflected across the y-axis, and translated up 5 units. Write the square-root function g(x) for this transformation.

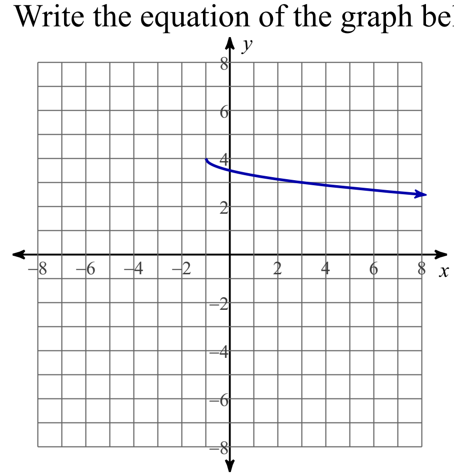
$\frac{1}{4}\sqrt{-x} + 5$

10) Write the equation of the graph below



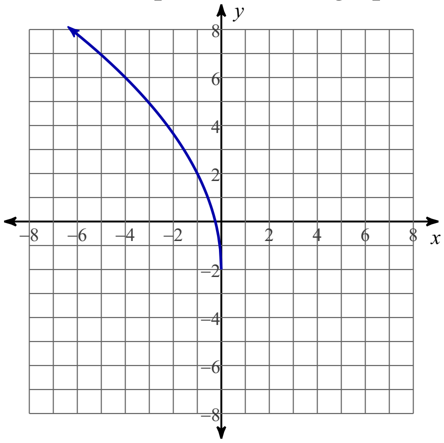
$-2\sqrt{x+5} + 5$

11) Write the equation of the graph below



$-\frac{1}{2}\sqrt{x+1} + 4$

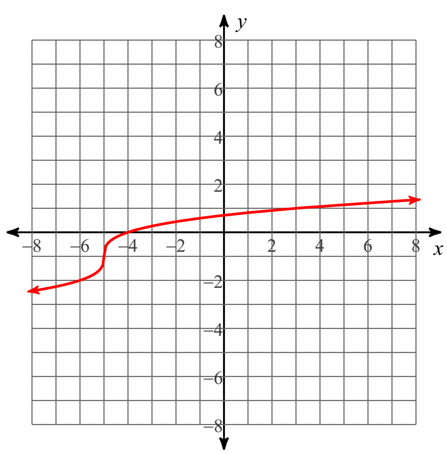
12) Write the equation of the graph below



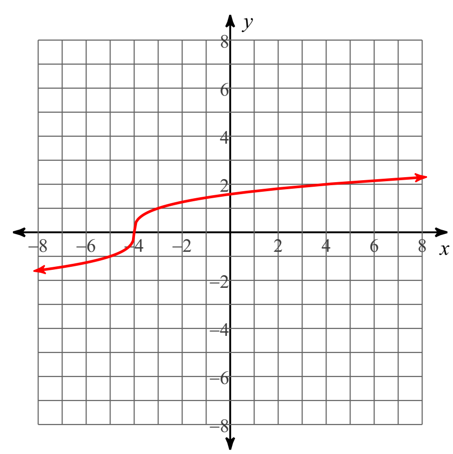
$4\sqrt{-x} - 2$

Sketch the graph of each function.

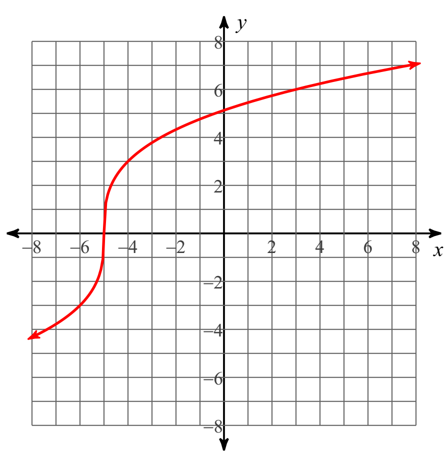
13) $y = \sqrt[3]{x+5} - 1$



14) $y = \sqrt[3]{x+4}$



15) $y = 3\sqrt[3]{x+5}$



16) $y = -2\sqrt[3]{x+3}$