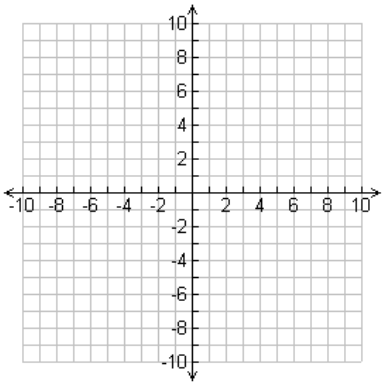
Name: _____

6.3: Graphing Radical Functions

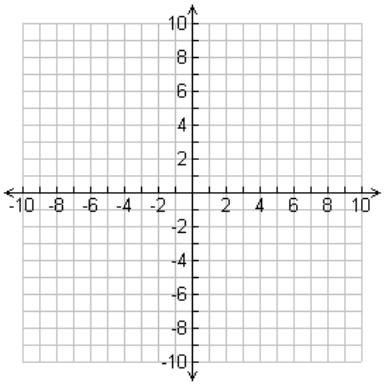
Graph each function. Then identify the listed properties. Show all work.

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



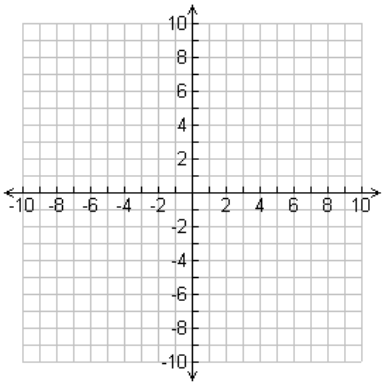
Domain: _____
Range: _____
Max/Min: _____
x-intercept(s): _____
y-intercept: _____
Increasing: _____
Decreasing: _____
Positive: _____
Negative: _____

2) $y = \frac{1}{2}\sqrt{x} + 1$



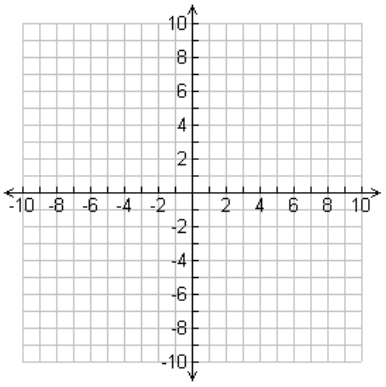
Domain: _____
Range: _____
Max/Min: _____
x-intercept(s): _____
y-intercept: _____
Increasing: _____
Decreasing: _____
Positive: _____
Negative: _____

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



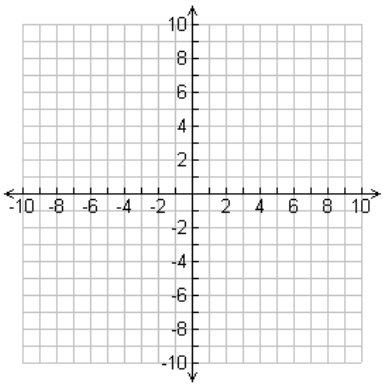
Domain: _____
Range: _____
Max/Min: _____
x-intercept(s): _____
y-intercept: _____
Increasing: _____
Decreasing: _____
Positive: _____
Negative: _____

4) $y = 2\sqrt[3]{x} - 5$



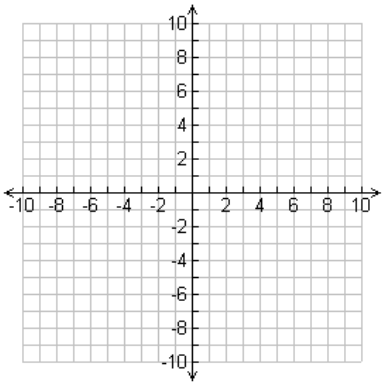
Domain: _____
Range: _____
Max/Min: _____
x-intercept(s): _____
y-intercept: _____
Increasing: _____
Decreasing: _____
Positive: _____
Negative: _____

5) $y = -\sqrt[3]{x-7} - 2$



Domain: _____
Range: _____
Max/Min: _____
x-intercept(s): _____
y-intercept: _____
Increasing: _____
Decreasing: _____
Positive: _____
Negative: _____

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



Domain: _____
Range: _____
Max/Min: _____
x-intercept(s): _____
y-intercept: _____
Increasing: _____
Decreasing: _____
Positive: _____
Negative: _____

Answer each question thoroughly. Show all work.

7) Find the average rate of change over the given interval.

$$y = -\sqrt{x} - 3;\ [4, 25]$$

8) Find the average rate of change over the given interval.

$$y = \sqrt[3]{x-5};\ [6, 32]$$