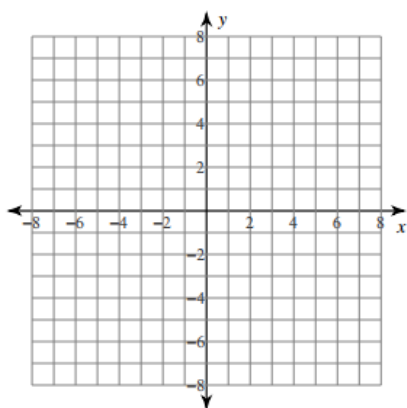


Domain and Range of Radical Functions

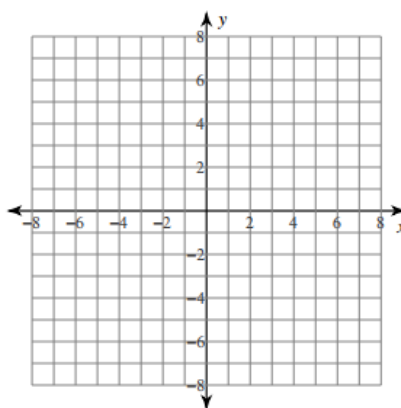


Sketch the graph of each function.

1) $y = \sqrt{x} + 8$



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



Identify the domain and range of each function.

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

10) $y = \sqrt[3]{(2x^2 - 2)} - 4$

4) $y = \sqrt[3]{x-1} - 1$

11) $y = 4\sqrt{4x^3 + 32} - 1$

5) $y = \sqrt{x-2} + 5$

12) $y = \sqrt[3]{(4x+8)} - 2x$

6) $y = \sqrt[3]{(x+1)} - 4$

13) $y = 7\sqrt{-2(2x+4)} + 1$

7) $y = 3\sqrt{3x+6} + 5$

14) $y = \sqrt[5]{(4x^2 - 5)} - 2$

8) $y = \sqrt[3]{(2x-1)} - 4$

15) $y = 2x\sqrt{5x^4 + 6} - 2x$

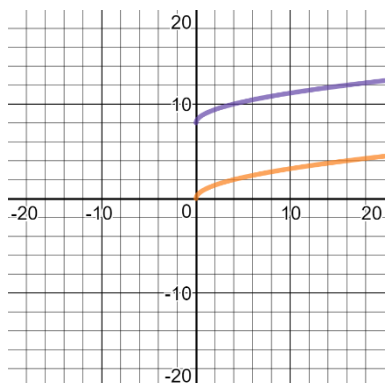
9) $y = 6\sqrt{3x^2 + 6} + 5$

16) $y = 6\sqrt[3]{(8x^6 + 2x + 8)} - 2$

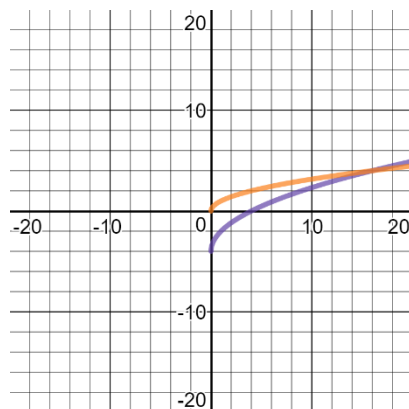
Answers

Domain and range of radical functions

1)



2)


3) domain: $x \geq -2$

range: $y \geq -3$

4) domain: {all real numbers}

range: {all real numbers}

5) domain: $x \geq 2$

range: $y \geq 5$

6) domain: {all real numbers}

range: {all real numbers}

7) domain: $x \geq -2$

range: $y \geq 5$

8) domain: {all real numbers}

range: {all real numbers}

9) domain: {all real numbers}

range: {all real numbers}

10) domain: {all real numbers}

range: {all real numbers}

11) domain: $x \geq -2$

range: $y \geq -1$

12) domain: {all real numbers}

range: {all real numbers}

13) domain: $x \leq -2$

range: $y \geq 1$

14) domain: {all real numbers}

range: {all real numbers}

15) domain: {all real numbers}

range: {all real numbers}

16) domain: {all real numbers}

range: {all real numbers}