

# Math Worksheets

## Domain and Range of Radical Functions

 Identify the domain and range of each function.

1)  $y = \sqrt{x + 8} - 7$

8)  $y = \sqrt[3]{(7x^2 - 2)} - 6$

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

9)  $y = 2\sqrt{2x^3 + 16} - 3$

3)  $y = \sqrt{3x - 9} + 3$

10)  $y = \sqrt[3]{(11x + 4)} - 2x$

4)  $y = \sqrt[3]{(4x + 6)} - 2$

11)  $y = 3\sqrt{-2(4x + 8)} + 5$

5)  $y = 3\sqrt{4x + 20} + 6$

12)  $y = \sqrt[5]{(3x^2 - 12)} - 6$

6)  $y = \sqrt[3]{(5x - 2)} - 11$

13)  $y = 3\sqrt{x - 5} - 2$

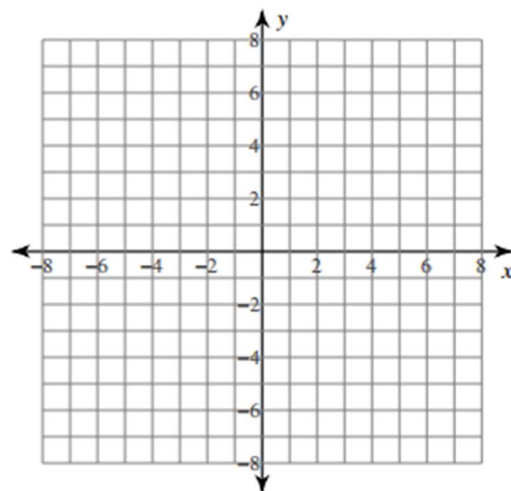
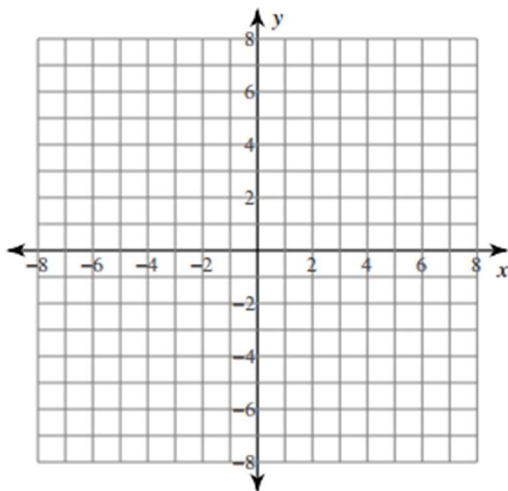
7)  $y = 4\sqrt{9x^2 + 8} + 3$

14)  $y = \sqrt[3]{6x + 9} - 4$

 Sketch the graph of each function.

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

16)  $y = 3\sqrt{x} - 6$



# Answers of Worksheets

## Domain and range of radical functions

1) domain:  $x \geq -8$

range:  $y \geq -7$

2) domain: {all real numbers}

range: {all real numbers}

3) domain:  $x \geq 3$

range:  $y \geq 3$

4) domain: {all real numbers}

range: {all real numbers}

5) domain:  $x \geq -5$

range:  $y \geq 6$

6) domain: {all real numbers}

range: {all real numbers}

7) domain: {all real numbers}

range:  $y \geq 8\sqrt{2} + 3$

8) domain: {all real numbers}

range: {all real numbers}

9) domain:  $x \geq -2$

range:  $y \geq -3$

10) domain: {all real numbers}

range: {all real numbers}

11) domain:  $x \leq -2$

range:  $y \geq 5$

12) domain: {all real numbers}

range: {all real numbers}

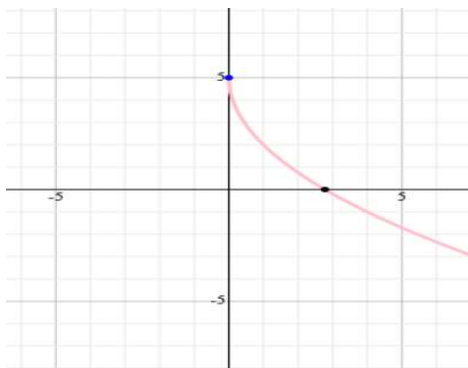
13) domain:  $x \geq 5$

range:  $y \geq -2$

14) domain: {all real numbers}

range: {all real numbers}

15)



16)

