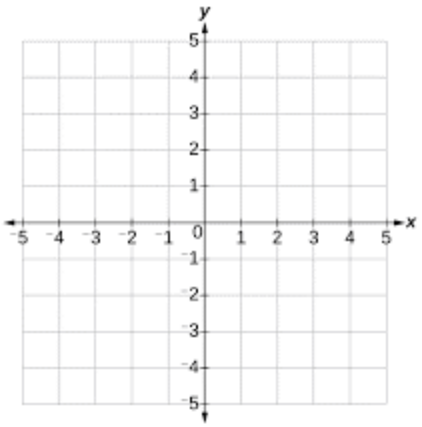
Name:

Date:

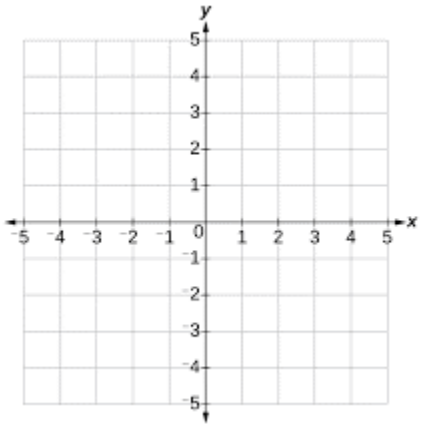
Domain and Range of Radical Functions

Sketch the graph of each function.

1) $y = \sqrt{x} - 1$



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



Identify the domain and range of each.

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

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

5) $y = \sqrt[3]{x - 2} - 8$

6) $y = \sqrt{3x - 9} + 6$

7) $y = \sqrt{9x^2 - 9}$

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

9) $y = 7\sqrt[5]{2x^4 + 5x^3 - x^2 - x + 1} + 7$

10) $y = 2x\sqrt[4]{x^4 + 1} + 1$

Domain and Range of Radical Functions

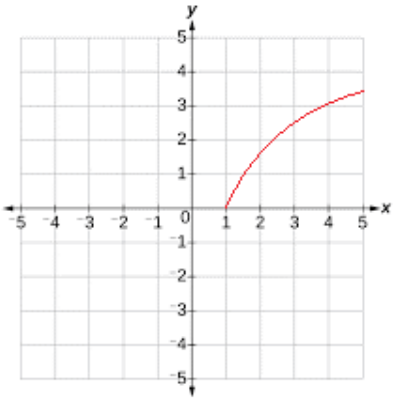
Name:

Date:

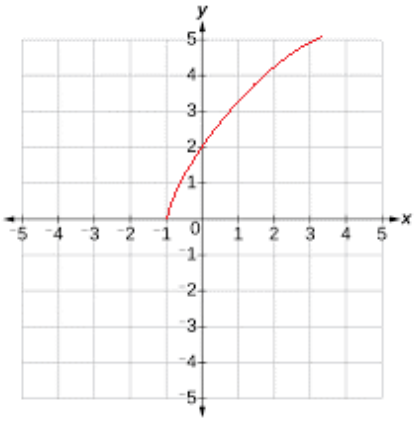
Answers

Sketch the graph of each function.

1) $y = \sqrt{x} - 1$



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



Identify the domain and range of each.

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

$\mathcal{D}: x \geq 5$

$\mathcal{R}: y \geq +3$

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

$\mathcal{D}: x \geq -1$

$\mathcal{R}: y \geq -2$

5) $y = \sqrt[3]{x - 2} - 8$

$\mathcal{D}: -\infty < x < +\infty$

$\mathcal{R}: -\infty < x < +\infty$

6) $y = \sqrt{3x - 9} + 6$

$\mathcal{D}: x \geq 3$

$\mathcal{R}: y \geq 6$

7) $y = \sqrt{9x^2 - 9}$

$\mathcal{D}: (x \geq 1) \cup (x \leq -1)$

$\mathcal{R}: y \geq 0$

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

$\mathcal{D}: -\infty < x < +\infty$

$\mathcal{R}: y \geq -4$

9) $y = 7\sqrt[5]{2x^4 + 5x^3 - x^2 - x + 1} + 7$

$\mathcal{D}: -\infty < x < +\infty$

$\mathcal{R}: -\infty < x < +\infty$

10) $y = 2x\sqrt[4]{x^4 + 1} + 1$

$\mathcal{D}: -\infty < x < +\infty$

$\mathcal{R}: -\infty < x < +\infty$