

8.5.1 Graphing Radical Functions (Square Roots)

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Identify the domain and range of each. Then sketch the graph.

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

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

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

4) $y = \sqrt{x}$

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

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

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

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

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

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

11) $y = \sqrt{x+6} - 1$

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

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

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

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

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

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

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

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

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

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

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

23) $y = 3\sqrt{x}$

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

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

26) $y = 3\sqrt{x}$

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

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

29) $y = \sqrt{4x}$

30) $y = \sqrt{9x}$

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

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

33) $y = \sqrt{4x}$

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

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

36) $y = 2\sqrt{x+6} - 2$

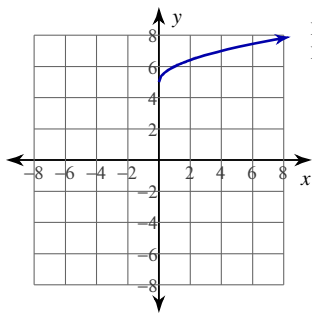
37) $y = 2\sqrt{x+2} - 2$

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

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

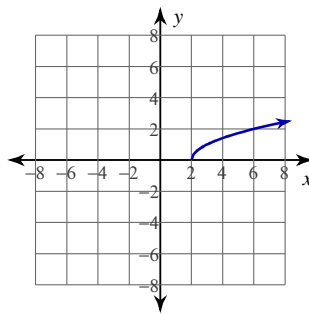
Answers to 8.5.1 Graphing Radical Functions (Square Roots)

1)



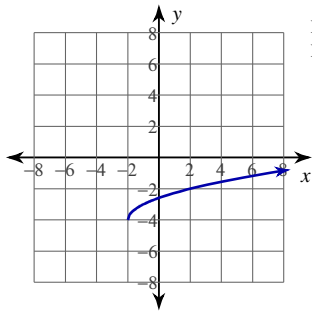
Domain: $x \geq 0$
Range: $y \geq 5$

3)



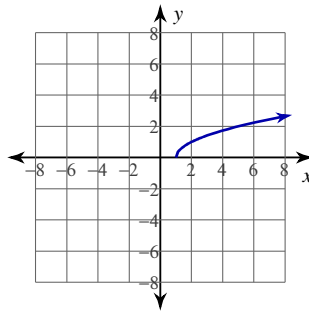
Domain: $x \geq 2$
Range: $y \geq 0$

5)



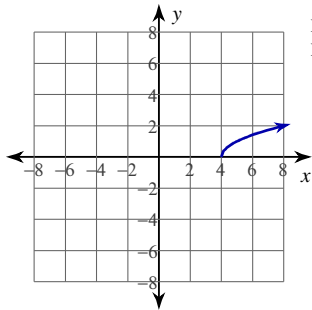
Domain: $x \geq -2$
Range: $y \geq -4$

7)



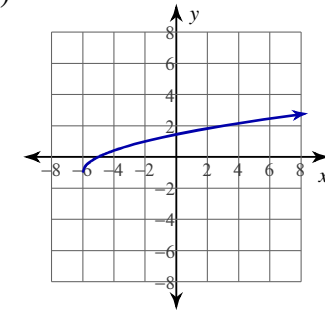
Domain: $x \geq 1$
Range: $y \geq 0$

9)



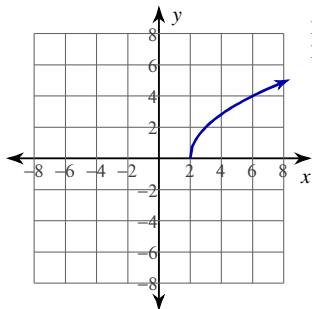
Domain: $x \geq 4$
Range: $y \geq 0$

11)



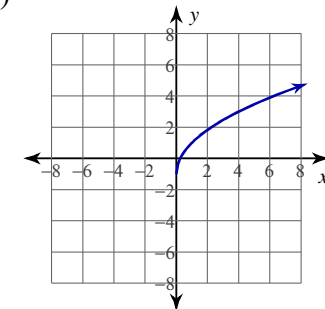
Domain: $x \geq -6$
Range: $y \geq -1$

13)



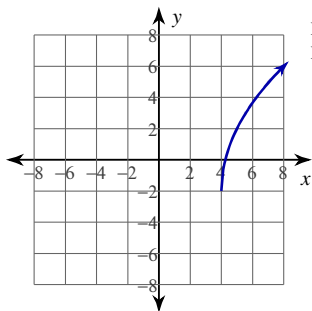
Domain: $x \geq 2$
Range: $y \geq 0$

15)



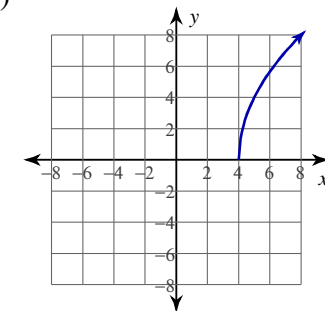
Domain: $x \geq 0$
Range: $y \geq -1$

17)



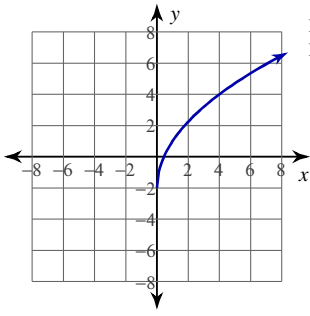
Domain: $x \geq 4$
Range: $y \geq -2$

19)



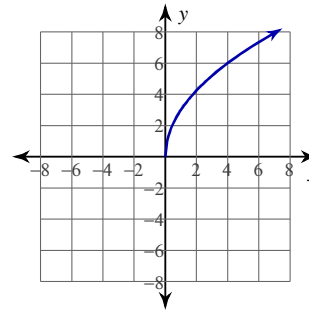
Domain: $x \geq 4$
Range: $y \geq 0$

21)



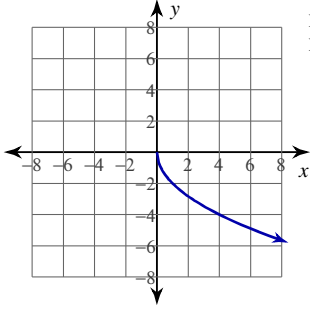
Domain: $x \geq 0$
Range: $y \geq -2$

23)



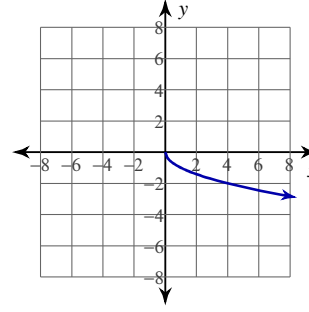
Domain: $x \geq 0$
Range: $y \geq 0$

25)



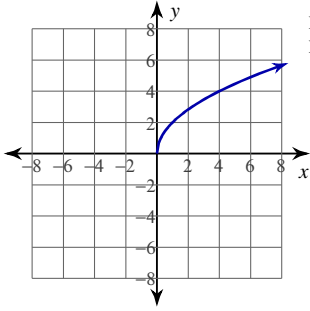
Domain: $x \geq 0$
Range: $y \leq 0$

27)



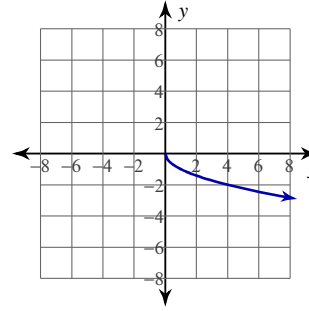
Domain: $x \geq 0$
Range: $y \leq 0$

29)



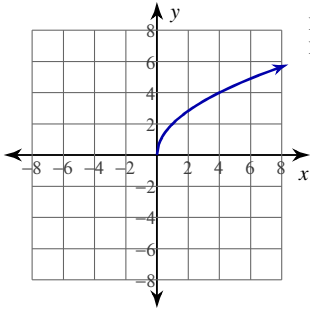
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Range: $y \geq 0$

31)



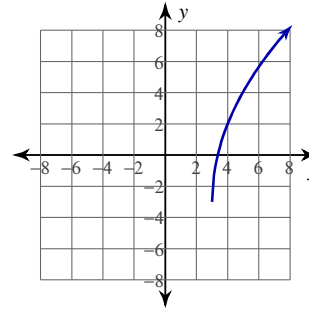
Domain: $x \geq 0$
Range: $y \leq 0$

33)



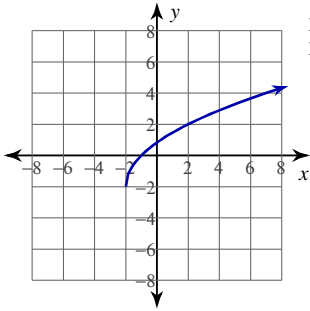
Domain: $x \geq 0$
Range: $y \geq 0$

35)



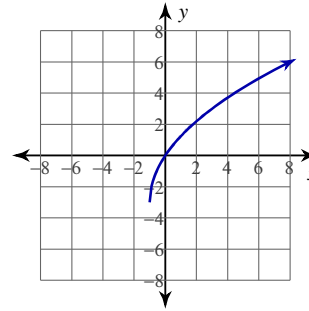
Domain: $x \geq 3$
Range: $y \geq -3$

37)



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

39)



Domain: $x \geq -1$
Range: $y \geq -3$