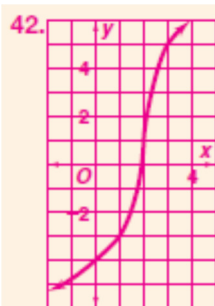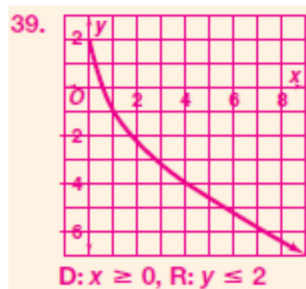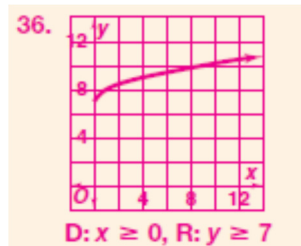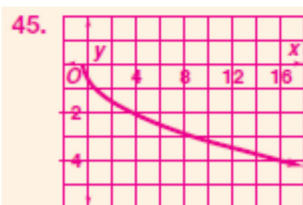# Page 411 # 30 – 50 (mult 0f 3), 64, 65 Answers

30. $y = 3\sqrt{x} - 1$; the graph is the graph of $y = 3\sqrt{x}$ translated 1 unit to the right.

33. $y = 4\sqrt[3]{x} + 2$; the graph is the graph of $y = 4\sqrt[3]{x}$ translated 2 units to the left.

36.

D: $x \geq 0$, R: $y \geq 7$

39.

D: $x \geq 0$, R: $y \leq 2$

42.

D: all real numbers, R: all real numbers

45.

$x \geq -\frac{1}{2}$, R: $y \leq 0$

48.
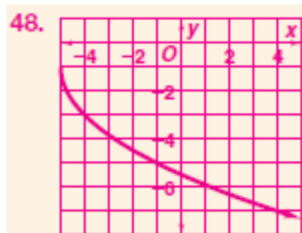
D: $x \geq -5$, R: $y \leq -1$

64. $y = -\sqrt{2}\sqrt{x + 4}$; the graph is the graph of $y = -\sqrt{2x}$ translated 4 units to the left; domain: $x \geq -4$, range: $y \leq 0$.

65. $y = -\sqrt{8}\sqrt{x - \frac{3}{4}}$; the graph is the graph of $y = -\sqrt{8x}$ translated $\frac{3}{4}$ units to the right; domain: $x \geq \frac{3}{4}$, range: $y \leq 0$.