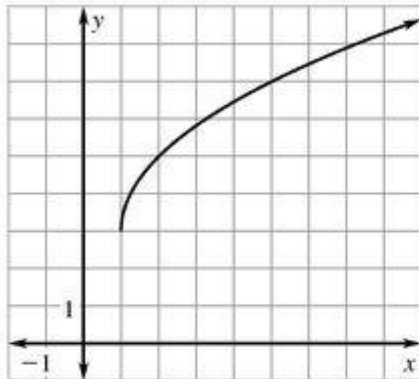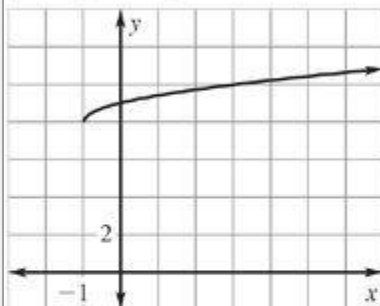$f(x) = 2\sqrt{x - 1} + 3$

16.

Because $h = 1$ and $k = 3$, shift the graph of $f(x) = 2\sqrt{x}$ right 1 unit and up 3 units.

The domain is $x \geq 1$ and the range is $f(x) \geq 3$.

17.

$y = (x + 1)^{1/2} + 8 = \sqrt{x + 1} + 8$
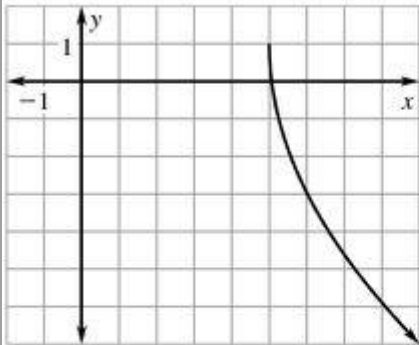

Because $h = -1$ and $k = 8$, shift the graph of $y = x^{1/2}$ left 1 unit and up 8 units.

The domain is $x \geq -1$ and the range is $y \geq 8$.
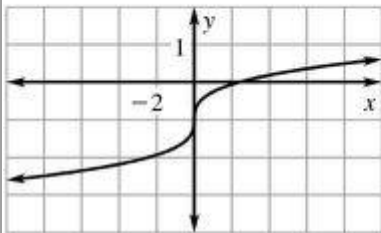
18.

$y = -4\sqrt{x-5} + 1$

Because $h = 5$ and $k = 1$, shift the graph of $y = -4\sqrt{x}$ right 5 units and up 1 unit.

The domain is $x \geq 5$ and the range is $y \leq 1$.

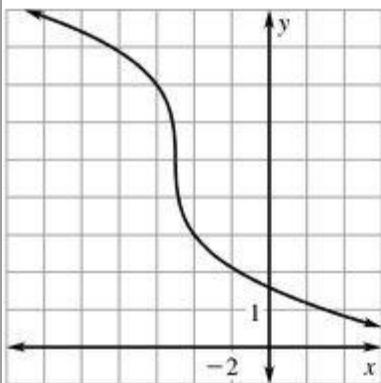**19.**

$y = \frac{3}{4}x^{1/3} - 1 = \frac{3}{4}\sqrt[3]{x} - 1$

Because $h = 0$ and $k = -1$, shift the graph of

$y = \frac{3}{4}x^{1/3}$ down 1 unit.

The domain and range are both all real numbers.
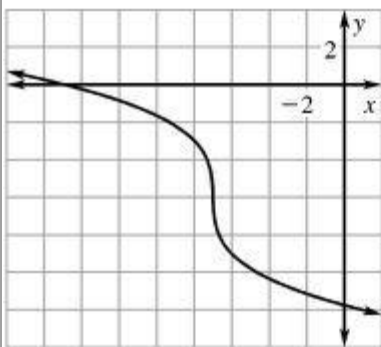
20.

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

Because $h = -5$ and $k = 5$, shift the graph of $y = -2\sqrt[3]{x}$ left 5 units and up 5 units.

The domain and range are both all real numbers.

21.

$h(x) = -3\sqrt[3]{x + 7} - 6$
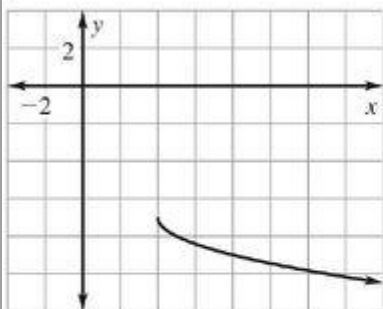

Because $h = -7$ and $k = -6$, shift the graph of $h(x) = -3\sqrt[3]{x}$ left 7 units and down 6 units.

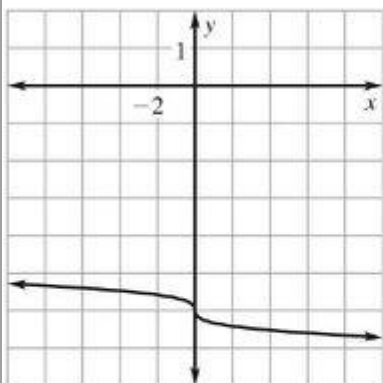The domain and range are both all real numbers.

22. $y = -\sqrt{x - 4} - 7$

Because $h = 4$ and $k = -7$, shift the graph of $y = -\sqrt{x}$ right 4 units and down 7 units.

The domain is $x \geq 4$ and the range is $y \leq -7$.
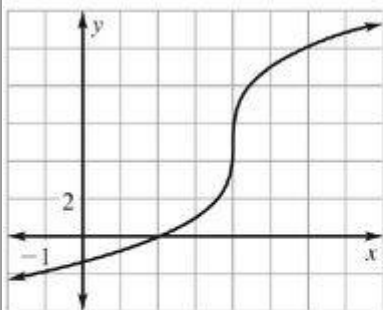
23. $g(x) = -\frac{1}{3}\sqrt[3]{x} - 6$

Because $h = 0$ and $k = -6$ shift the graph of $g(x) = \frac{1}{3}\sqrt[3]{x}$ down 6 units.

The domain and range are both all real numbers.

24. $y = 4\sqrt[3]{x - 4} + 5$

Because $h = 4$ and $k = 5$, shift the graph of $y = 4\sqrt[3]{x}$ right 4 units and up 5 units.

The domain and range are both all real numbers.