Graphing Radical Functions Worksheet #1

Radical Functions are of the form $f(x) = a\sqrt{x - h} + k$

To graph a radical function, use tables and your knowledge of transformations.

If using a table, find convenient x-values that lie in the domain of the function.

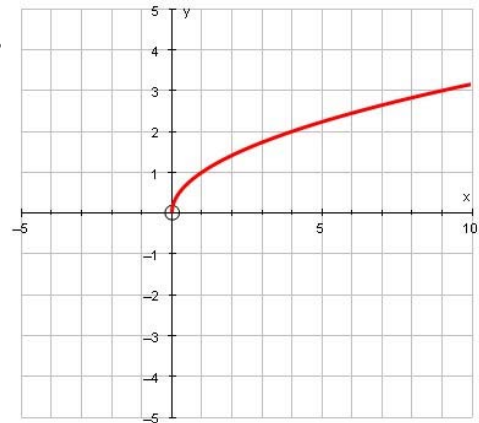The Domain of $f(x) = a\sqrt{x - h} + k$ is $x - h \geq 0$.

The parent function $f(x) = \sqrt{x}$ or $f(x) = \sqrt[3]{x}$ can be stretched, shifted (horizontally or vertically) and flipped

a: The vertical stretch or flip.
h: The horizontal shift
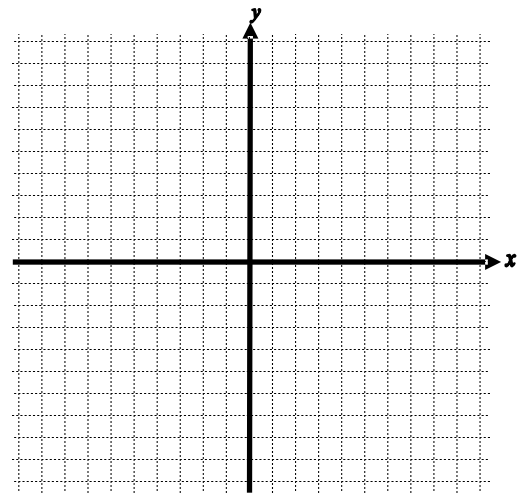k: The vertical shift.

Graph is $f(x) = \sqrt{x}$

Complete the following tables and graph each function.
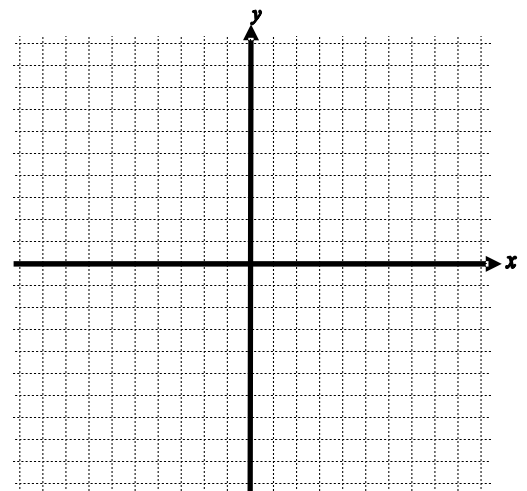
1. $f(x) = 2\sqrt{x} - 3$ Domain:

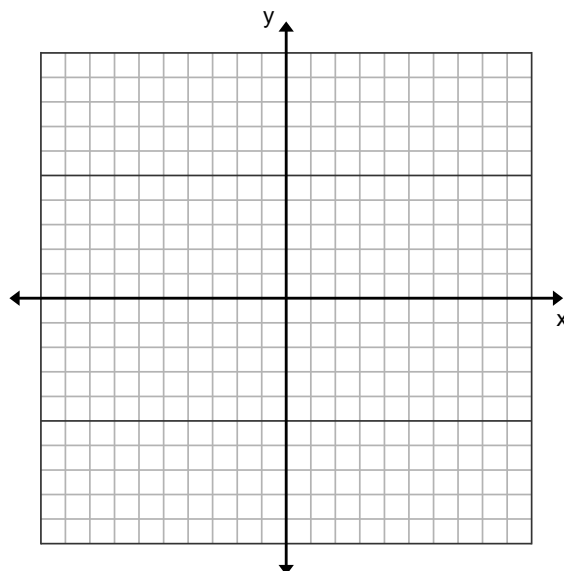| x	f(x)	y

2. $f(x) = -\sqrt{x + 2} - 1$ Domain:

x	f(x)	y

3. $f(x) = \sqrt[3]{x+5} - 2$ Domain:

x	f(x)	y

4. $f(x) = \dfrac{1}{2}\sqrt[3]{x-3} + 4$ Domain:

x	f(x)	y
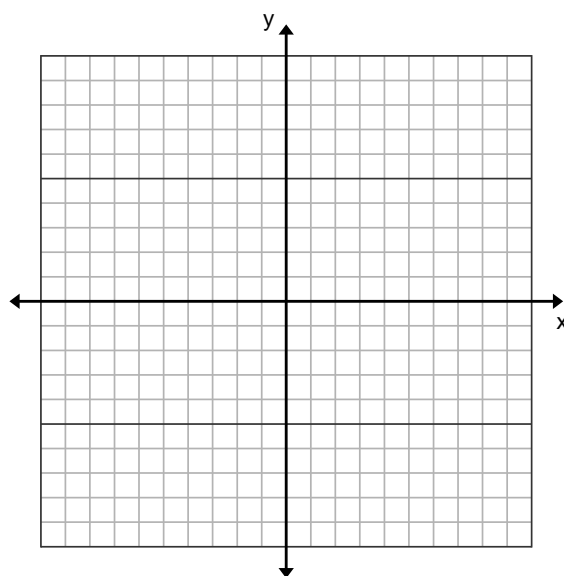
5. $f(x) = -\sqrt[3]{x} + 3$ Domain:

x	f(x)	y
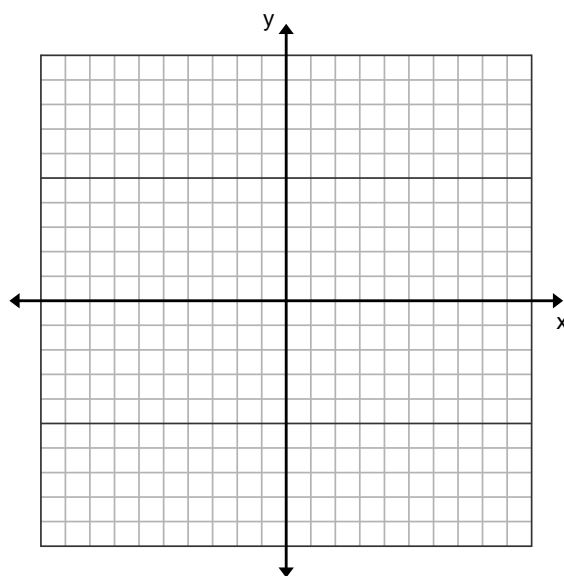
6. $f(x) = \sqrt{4-x} + 1$ Domain:

x	f(x)	y
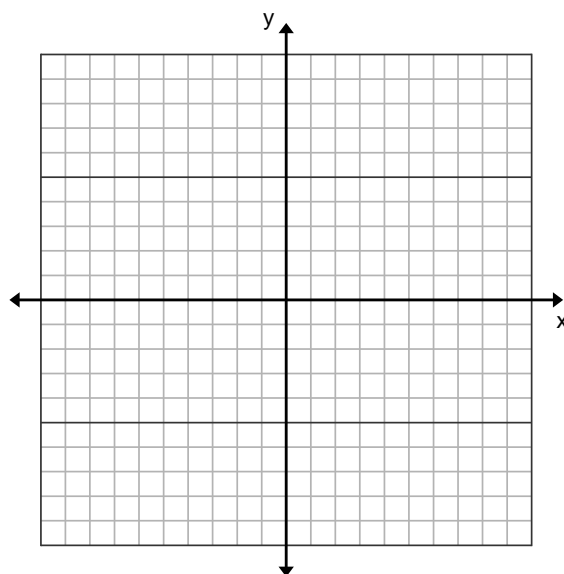
7. $f(x) = -\sqrt{-2-x}$ Domain:

x	f(x)	y

8. $f(x) = \sqrt[3]{x+1} - 4$ Domain:

x	f(x)	y