

4a.1

(h, k)

Starting point

LO: GRAPHING RADICAL EQUATIONS
SQUARE ROOT $f(x) = \sqrt{x}$
CUBE ROOT $f(x) = \sqrt[3]{x}$

$$f(x) = a\sqrt{b(x-h)} + k$$

- If a is negative then the graph reflects across the x-axis.
- If $|a|$ is a fraction between 0 and 1 the graph is a vertical shrink.
- If $|a|$ is a number greater than 1 the graph is a vertical stretch.
- If b is negative then the graph reflects across the y-axis.
- If b is a fraction between 0 and 1 the graph is a horizontal stretch.
- If b is a number greater than 1, the graph is a horizontal shrink.

h: like x's lie!
Be careful with h.

- If h is positive then the graph moves right.
- If h is negative then the graph moves left.

If k is positive then the graph moves up.
If k is negative then the graph moves down.