

## Objective 2 - Graph

Identify the graph of a radical function.

*Note: No section in the textbook directly talks about how to graph radical functions.*

First, watch [this video](#) to learn how to convert between a radical function and its graph. I also suggest visiting [this Desmos page](#) to see how various numbers affect radical functions. Focus on what changing  $h$  and  $k$  does to each type of radical function.

**Question 1** Write the equation of the function graphed below. Assume  $a = 1$  or  $a = -1$ .



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

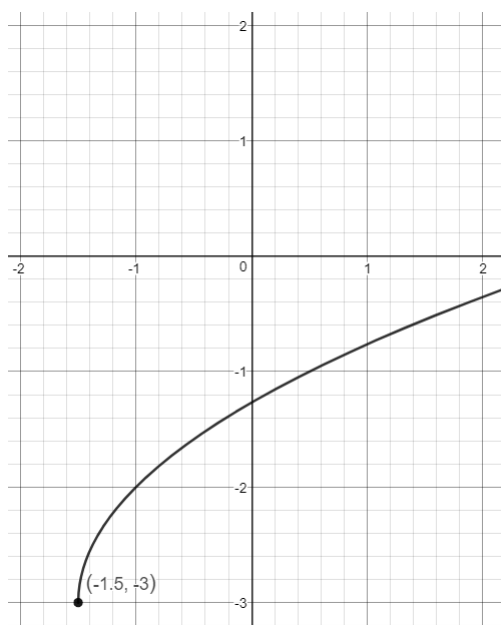
**Question 2** Write the equation of the function graphed below. Assume  $a = 1$  or  $a = -1$ .

*Hint: Be sure to remove the decimal. For example, if  $x$  is shifting by 0.75 to the right, then standard form would be  $4x - 3$  rather than  $x - 0.75$ .*

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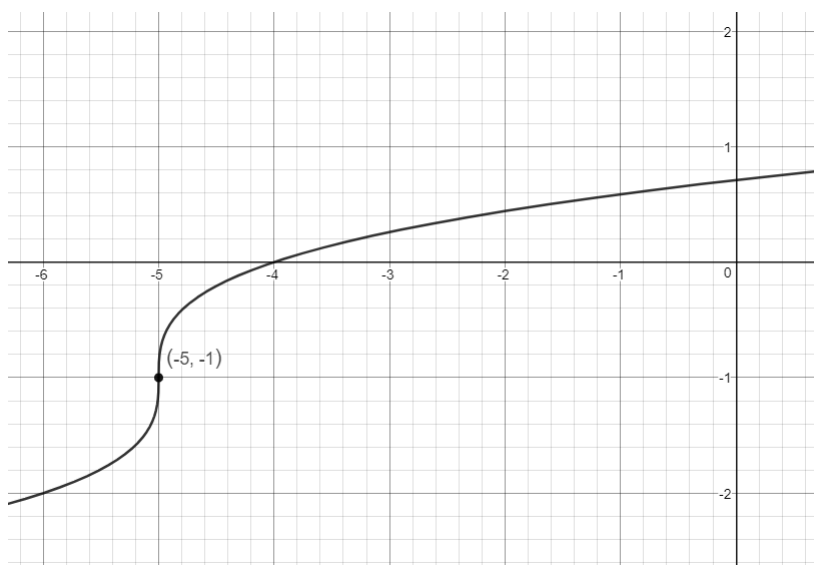
Learning outcomes:  
Author(s): Darryl Chamberlain Jr.

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

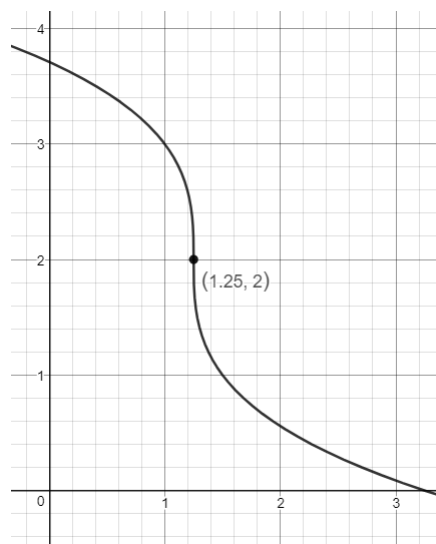
**Question 3** Write the equation of the function graphed below.



$$f(x) = \boxed{1} \sqrt[3]{\boxed{x + 5}} + \boxed{-1}$$

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**Question 4** Write the equation of the function graphed below. *Hint: Be sure to remove the decimal. For example, if  $x$  is shifting by 0.75 to the right, then standard form would be  $4x - 3$  rather than  $x - 0.75$ .*



$$f(x) = \boxed{-1} \sqrt[3]{\boxed{4x - 5}} + \boxed{2}$$