



The **domain** of a function is the complete set of possible values of the independent variable.

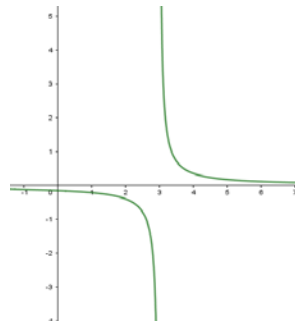
In plain English, this definition means:

The domain is the set of all possible x -values which will make the function "work" and will output real y -values.

When finding the **domain**, remember:

The denominator (bottom) of a fraction **cannot be zero**

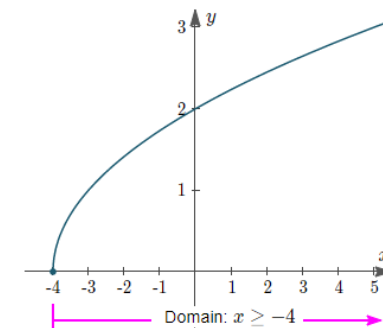
the function $f(x) = \frac{\sqrt{x+2}}{x^2-9}$,



The domain of this function is $x \neq \pm 3$, since those values make the denominator zero.

The number under a square root sign **must be positive** in this section

Here is the graph of $y = \sqrt{x+4}$:



The domain of this function is $x \geq -4$, since x cannot be less than -4

We have to **avoid 0 on the bottom of a fraction**, or **negative values under the square root sign**