

$$f(x) = \frac{6}{x-2}$$

$$g(x) = \sqrt{x+5}$$

$$g(-5) = \sqrt{0} = 0$$

Find each:

$$f(4) = 3$$

$$f(-1) = -2$$

$$f(2) = \text{undef}$$

$$g(4) = 3$$

$$g(-4) = 1$$

$$g(-6) = \text{DNE}$$

$$\underline{\hspace{2cm}} = 0$$

$$(x-1)(x+2) = 0$$

$$\boxed{x=1, -2}$$

$$f(x) = \frac{6}{x-2}$$

What values is
x allowed to have
in order to be able to find
f(x)? Anything but 2.

$$h(x) = \frac{1}{x^2 - x - 6}$$

$$h(x) = \frac{1}{(x-3)(x+2)}$$

$$h(3) = \text{undef}$$

$$h(-2) = \text{undef}$$

x can be anything
but 3 or -2.

What can x_1 be?

$$g(x) = \frac{1}{x^2 - 9}$$

x can be anything
but 3 or -3.

$$\rightarrow g(x) = \frac{1}{(x-3)(x+3)}$$

What is the domain of $g(x) = \frac{1}{x^2 - 9}$?

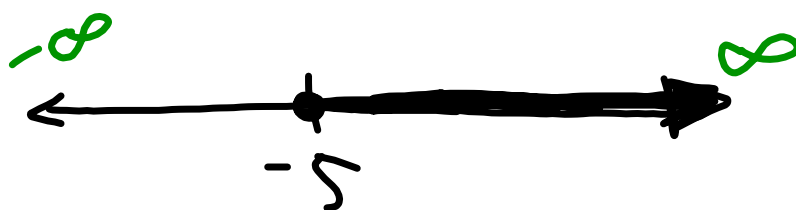
~~$\{x \mid x \neq 3, -3\}$~~

The
 or
 say
 9/1
 x's
 such
 they

$x \neq 3, -3$ ok

$$g(x) = \sqrt{x+5}$$

x can be $[-2, 5]$



The domain of $g(x) = \sqrt{x+5}$ is $x \geq -5$.

The domain of $g(x) = \sqrt{x+5}$ is $[-5, \infty)$.