

September 25, 2017

in (Domain) \times valid inputs \rightarrow "f" $\frac{1}{x}$ \rightarrow out (range)

1	1
2	$\frac{1}{2}$
3	$\frac{1}{3}$
-2	$-\frac{1}{2}$
0	undef

Domain: $(-\infty, 0) \cup (0, \infty)$ (union of)

Sep 25-10:57 AM

$x \rightarrow$ $\frac{x+1}{x-5 \neq 0}$ "g" $\rightarrow g(x)$

$x-5 \neq 0$
 $x \neq 5$

$D: (-\infty, 5) \cup (5, \infty)$

$g(x) = \frac{x+1}{x-5}$

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$f(x) = \frac{x}{x^2 - x - 12 \neq 0}$
 $(x-4)(x+3) \neq 0$
 $x \neq 4$
 $x \neq -3$

Domain: $(-\infty, -3) \cup (-3, 4) \cup (4, \infty)$

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$g(x) = \sqrt[2]{x+5} \geq 0$
 $x \geq -5$

$\sqrt{x} = |x| = +x$

Domain: $[-5, \infty)$

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$f(x) = \frac{1}{\sqrt{x+2} \geq 0}$
 $x \geq -2$

$f(-2) = \frac{1}{\sqrt{-2-2}} = \frac{1}{\sqrt{0}} = \frac{1}{0}$

Domain: $(-2, \infty)$

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$h(x) = \frac{\sqrt{x-3} \geq 0}{x-3 \neq 0}$
 $x \geq 3$
 $x \neq 3$

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

Domain: $(3, \infty)$

Sep 25-11:26 AM

1.2
#53

$$y = \sqrt{x+1}$$

$$0 = (\sqrt{x+1})^2$$

$$0 = x+1$$

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

x	y
-1	0 kind
0	1 kind

$$y = \sqrt{0+1}$$

$$y = \sqrt{1}$$

$$y = 1$$

Sep 25-11:40 AM