A rational function is a function that can be written in the form

$$f(x) = \frac{p(x)}{q(x)}$$

where $p(x)$ and $q(x)$ are polynomial functions and $q(x)$ is not the zero polynomial.

The Domain of a rational function is the set of all real numbers except those for which the denominator $q(x)$ is equal to 0.

Find the Domain of the following rational functions

$$f(x) = \frac{1}{x - 4}$$

The Domain of a rational function is the set of all real numbers except those for which the denominator $q(x)$ is equal to 0.

$$q(x) \neq 0$$

Find the Domain of the following rational functions

$$g(x) = \frac{x^2 + x - 12}{2x^2 - 18}$$

The Domain of a rational function is the set of all real numbers except those for which the denominator $q(x)$ is equal to 0.

$$q(x) \neq 0$$

Find the Domain of the following rational functions

$$h(x) = \frac{x^4 + 3x^3}{x^2 + 1}$$

The Domain of a rational function is the set of all real numbers except those for which the denominator $q(x)$ is equal to 0.

$$q(x) \neq 0$$

A rational function is expressed in Lowest Terms if $p(x)$ and $q(x)$ have no common factors.

$$g(x) = \frac{x^2 + x - 12}{2x^2 - 18}$$

$$h(x) = \frac{x^2 + 7x + 10}{2x^2 + 3x - 2}$$

A rational function is a function that can be written in the form

$$f(x) = \frac{p(x)}{q(x)}$$

where $p(x)$ and $q(x)$ are polynomial functions and $q(x)$ is not the zero polynomial.

The Domain of a rational function is the set of all real numbers except those for which the denominator $q(x)$ is equal to 0.

$$q(x) \neq 0$$

A rational function is expressed in Lowest Terms if $p(x)$ and $q(x)$ have no common factors.