

2.5 Practice Activity

Practice 2.5-1-1:

Find the domain of the rational function.

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

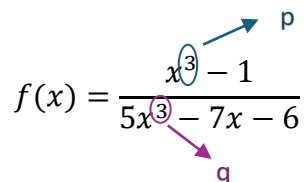
Practice 2.5-2-1:

Find the vertical asymptotes and removable discontinuities of the function.

$$f(x) = \frac{x - 2}{x^2 - 4}$$

Practice 2.5-3-1:

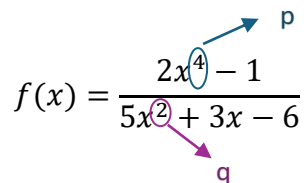
Find the horizontal asymptotes of the function.



The function is $f(x) = \frac{x^3 - 1}{5x^3 - 7x - 6}$. The numerator $x^3 - 1$ has a blue circle around the x^3 term, with a blue arrow pointing to the label 'p'. The denominator $5x^3 - 7x - 6$ has a pink circle around the x^3 term, with a pink arrow pointing to the label 'q'.

Practice 2.5-3-2:

Find the horizontal asymptotes of the function.



The function is $f(x) = \frac{2x^4 - 1}{5x^2 + 3x - 6}$. The numerator $2x^4 - 1$ has a blue circle around the x^4 term, with a blue arrow pointing to the label 'p'. The denominator $5x^2 + 3x - 6$ has a pink circle around the x^2 term, with a pink arrow pointing to the label 'q'.