



Q1) Find the Domain of the following functions using interval notation:

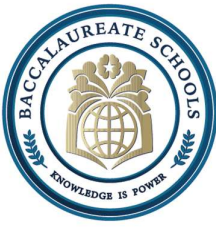
$$y = \frac{2x}{x^2 - 2x - 3}$$

$$y = \frac{x^2 + 4x + 6}{\sqrt{2x + 4}}$$

Q2) Find the Range of the following functions using interval notation:

$$y = \frac{1}{x^2}$$

$$y = \sqrt{x - 8} + 2$$



Q3)

Determine if $f(x) = x^3 - x^2 + x - 1$ is even, odd, or neither. Justify your answer.

Q4)

Find any vertical and horizontal asymptotes for the graph of $y = \frac{2x^2 - 4x}{x^2 + 4}$

Q5) Determine the intervals on which the following function increasing and/or the intervals on which it's decreasing.

$$f(x) = (x + 2)^2$$