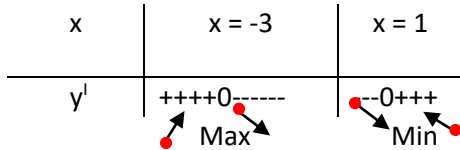


y' . Find a, b

Given: $y = \frac{x^2+a}{x+b}$

B(-3, y_1) is Max

C(1, y_2) is Min



a = ?

b = ?

$$y' = \frac{2x(x+b) - 1 \cdot (x^2+a)}{(x+b)^2}$$

$$= \frac{x^2 + 2bx - a}{(x+b)^2}$$

Extreme Points $y' = 0$

$$x^2 + 2bx - a = 0$$

we know $y'(x=-3) = 0$

$$y'(x=1) = 0$$

$$x = -3, \quad x = 1, \quad y' = 0$$

$$y' = 0 \quad 1 + 2b - a = 0$$

$$\begin{array}{l} (-) \left[\begin{array}{l} 9 - 6b - a = 0 \\ 1 + 2b - a = 0 \end{array} \right. \\ \hline 8 - 8b = 0 \end{array}$$

$$b = 1 \quad a = 3$$

$$y = \frac{x^2+3}{x+1}$$

$$2x(x+1) - (x^2+3) = 0$$

$$x^2 + 2x - 3 = 0$$

$$(x+3)(x-1) = 0$$

$$x + 3 = 0$$

$$x - 1 = 0$$

$$x = -3$$

$$x = 1$$

$$y = \frac{9+3}{-2} = -6$$

$$y = \frac{4}{2} = 2$$

(-3, -6) Max, (1, 2) Min