250. 154)

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

$$y = x - \frac{3}{(x+2)}$$

(or $y = x - 3(x+2)^{-1}$)

$$\begin{array}{r|l} & x \\ \hline x+2 & x^2+2x-3 \\ & x^2+2x \\ \hline & -3 \end{array}$$

---

xes

$x=0$: $y = \frac{-3}{2}$ $\Rightarrow$ $(0, -3/2)$

$y=0$: $0 = \frac{x^2+2x-3}{x+2}$

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

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

$x=-3$ $\quad x=1$ $\Rightarrow$ $(-3,0)$ & $(1,0)$

ımetry

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

$f(x) \neq \pm f(x)$ $\Rightarrow$ Nor odd/Even So no Symmetry

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x/Min Pts

$y = x - 3(x+2)^{-1}$

$\frac{dy}{dx} = 1 + 3(x+2)^{-2}$

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

ar Pts $\frac{dy}{dx}=0 \Rightarrow 1 + \frac{3}{(x+2)^2} = 0$

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

But, $3 \neq -(x+2)^2$

OR $(x+2)^2 \neq -3$ Impossible!

As $(x+2)^2 \neq -3$ No Stat Pts exist as no real roots exist

Extremes of Symptotes

$$y = x - \frac{3}{(x+2)}$$

Vertical Asymptote (undefined) when $(x+2) = 0$

At $x = -2$

$x \to -2^+ \quad y \to \infty^-$

$x \to -2^- \quad y \to \infty^+$

Non-Horizontal Asymptote $(x \to \pm\infty)$

$x \to +\infty \quad y \to x^-$

$x \to -\infty \quad y \to x^+$

Summary $(-3, 0), (1, 0), (0, -3/2)$ ~~& SPOT (-0.8, 0.16)~~