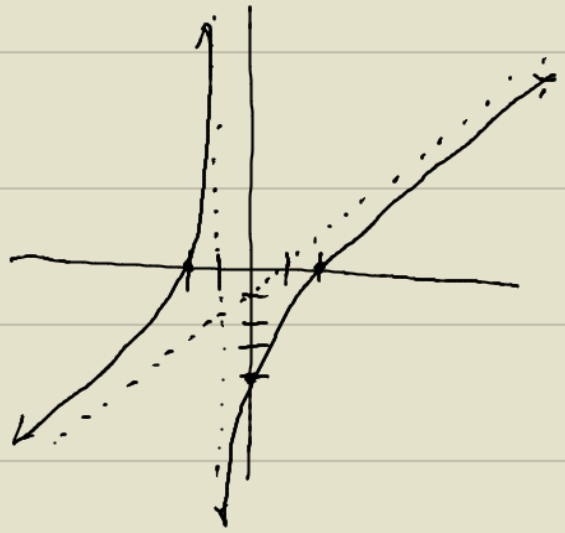
7. $y = \frac{x^2-4}{x+1}$



Domain: $x+1=0$

$x \neq -1$

X-INT: $0 = \frac{x^2-4}{x+1}$

$0 = x^2-4$

$0 = (x+2)(x-2)$

$x+2=0 \quad x-2=0$

$x=-2 \quad x=2$

Y-INT

$y = \frac{0^2-4}{0+1}$

$y=-4$

VA $y = \frac{(x+2)(x-2)}{x+1}$

$x+1=0$

$x=-1$

HA NONE

SA

$$x+1 \overline{)\, x^2+0x-4}$$

$$-(x^2+x)$$

$$-x-4$$

$$-(-x-1)$$

$$-3$$

$y = x-1$

$y = \frac{x^2-4}{x+1} \quad \begin{matrix})P & P' = 2x \\ )Q & Q' = 1 \end{matrix}$

$\frac{P'Q - PQ'}{Q^2}$

$y' = \frac{2x(x+1) - (x^2-4)(1)}{(x+1)^2}$

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

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

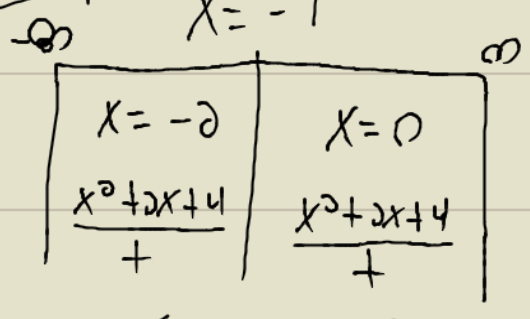
$x^2+2x+4=0$

NONE

$(x+1)^2=0$

$x+1=0$

$x=-1$



INC $(-\infty, -1)$

INC $(-1, \infty)$

NO MIN / MAX