14. $y = \dfrac{(x-1)}{(x^2-7x+12)}$

X-INT

$0 = \dfrac{x-1}{x^2-7x+12}$

$0 = x-1$

$1 = x$

Y-INT

$y = \dfrac{0-1}{0^2-7(0)+12}$

$y = \dfrac{-1}{12}$

VA

$x^2-7x+12 = 0$

$(x-3)(x-4) = 0$

$x-3=0 \quad x-4=0$

$x=3 \quad x=4$

VA

HA

$y = 0$

$y = \dfrac{x-1}{x^2-7x+12}$ $\quad f \quad f' = 1$; $\quad g \quad g' = 2x-7$

$$y' = \frac{f'g - fg'}{g^2}$$

$$y' = \frac{1(x^2-7x+12) - (x-1)(2x-7)}{(x^2-7x+12)^2}$$

$$= \frac{x^2-7x+12 - (2x^2-7x-2x+7)}{(x^2-7x+12)^2}$$

$$= \frac{x^2-7x+12 - (2x^2-9x+7)}{(x^2-7x+12)^2}$$

$$= \frac{x^2-7x+12-2x^2+9x-7}{(x^2-7x+12)^2}$$

$$y' = \frac{(-x^2+2x+5)}{(x^2-7x+12)^2}$$

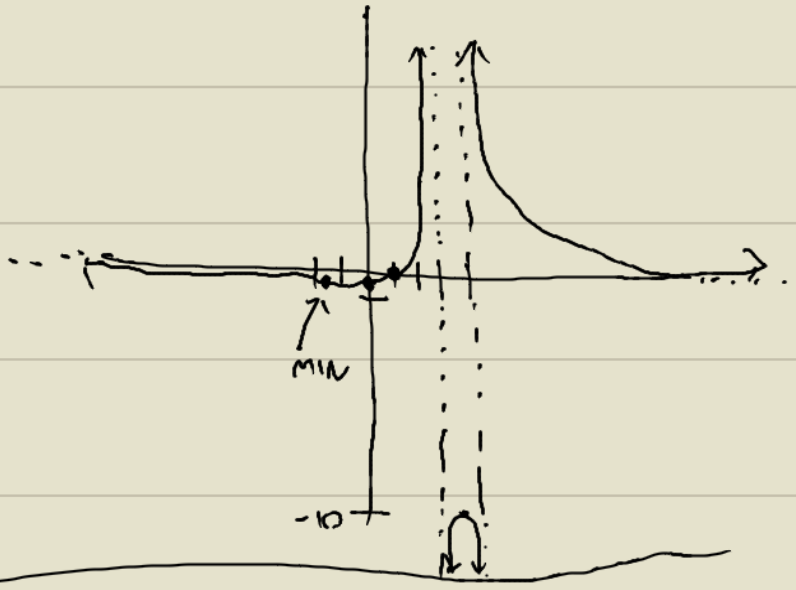
$-x^2+2x+5 = 0 \qquad (x^2-7x+12)^2 = 0$

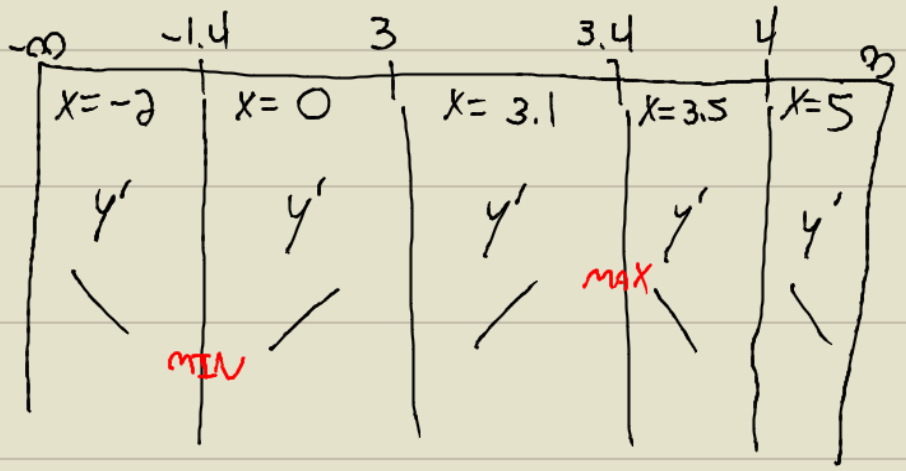
$x = -1.4 \quad x = 3.4$ $\qquad x^2-7x+12 = 0$

C.V.'s $\qquad (x-3)(x-4) = 0$

$x-3=0 \quad x-4=0$

$x=3 \quad x=4$





MIN $(-1.4, -.1)$

MAX $(3.4, -10)$

DEC $(-\infty, -1.4)$

INC $(-1.4, 3)$

INC $(3, 3.4)$

DEC $(3.4, 4)$

DEC $(4, \infty)$