

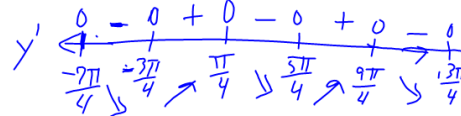
$$\textcircled{7} \quad y = \sin x + \cos x$$

$$\rightarrow y' = \cos x - \sin x$$

$$0 = \cos x - \sin x$$

$$\sin x = \cos x$$

$$x = \frac{\pi}{4} + \pi n$$



incr $(-\frac{3\pi}{4}, \frac{\pi}{4}), (\frac{5\pi}{4}, \frac{9\pi}{4}), \text{etc.}$

decr $(-\frac{7\pi}{4}, -\frac{3\pi}{4}), (\frac{\pi}{4}, \frac{5\pi}{4}), \text{etc.}$

$$\textcircled{23} \quad y = \frac{1x^2}{1x^2 - 4x + 3}, \quad x \neq 3, 1 \quad \text{horiz: } y = 1$$

$$y' = \frac{2x(x^2 - 4x + 3) - x^2(2x - 4)}{(x^2 - 4x + 3)^2} = \frac{-4x^2 + 6x}{(x^2 - 4x + 3)^2} = y'$$

$$0 = -4x^2 + 6x$$

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

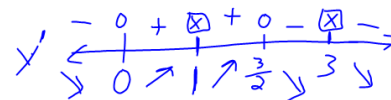
$$2x = 0 \quad -2x + 3 = 0$$

$$x = 0 \quad x = \frac{3}{2}$$

$$0 = x^2 - 4x + 3$$

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

$$x = \underline{\underline{3, 1}}$$



$$y = \frac{x^2}{x^2 - 4x + 3}$$

$$(0, 0) \quad (\frac{3}{2}, -3)$$

