

4,2f

Use Calculus to determine appropriate window or use calculator to approximate important values.

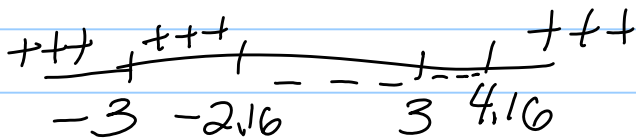
(ex) $f(x) = \frac{e^x}{x^2-9}$ from calculator
VA = 3 conc up (3, ∞)
HA = 0 conc down (-∞, 3)

$$f' = \frac{(x^2-9)e^x - e^x(2x)}{(x^2-9)^2} = \frac{e^x(x^2-2x-9)}{(x^2-9)^2}$$

$$f' = 0 \Rightarrow x^2 - 2x - 9 = 0$$

$$x = \frac{2 \pm \sqrt{4 + 4 \cdot 9}}{2} = 1 \pm \frac{1}{2} \sqrt{40}$$

$$\approx 4.162 \text{ or } -2.162$$



↑
zoom in here → see VA = -3

