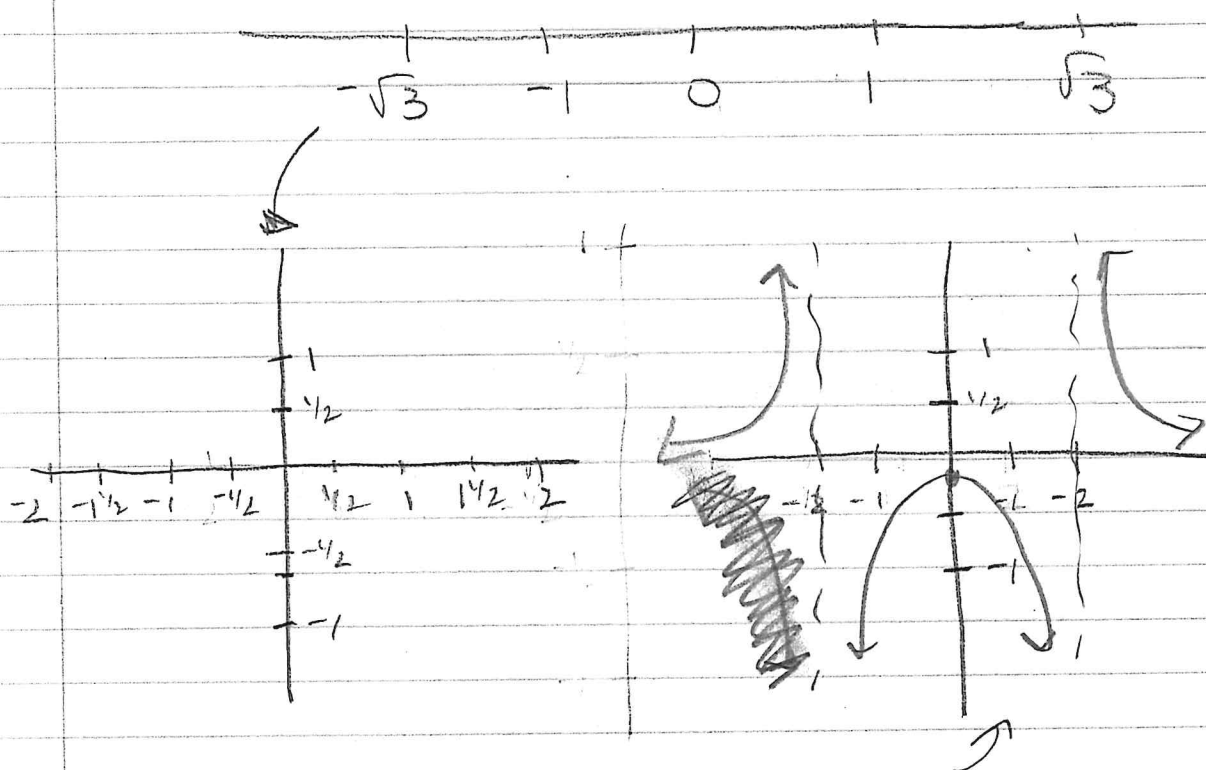


HA $y=0$ NO VA

$$f''(x) = f''(-\sqrt{3}) \underset{=0}{=} + \quad + \quad f''(0) \underset{=0}{=} - \quad - \quad f''(\sqrt{3}) \underset{=0}{=} +$$

$$f'(x) = \quad - \quad f'(-1) \underset{=0}{=} + \quad + \quad f'(1) \underset{=0}{=} - \quad -$$

$$f(x) = -\frac{\sqrt{3}}{4} \quad -\frac{1}{2} \quad 0 \quad \frac{1}{2} \quad \frac{\sqrt{3}}{4}$$



$$f''(x) = + \quad - \quad - \quad +$$

$$f'(x) = + \quad + \quad f'(0) \underset{=0}{=} - \quad -$$

$$f(x) = \text{und} \quad -\frac{1}{4} \quad \text{und}$$



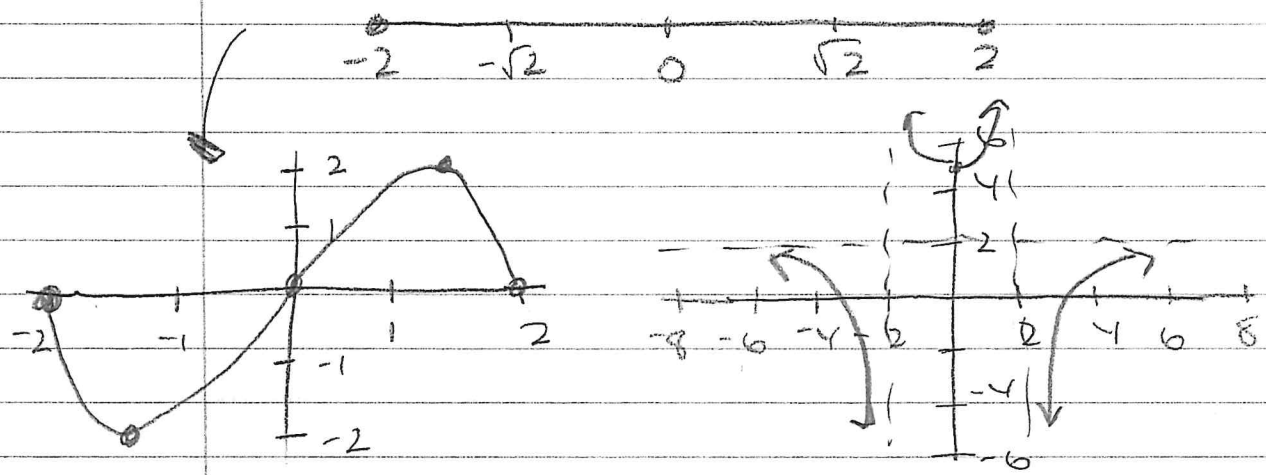
HA $y=1$ VA $x=\pm 2$

D: $-2 \leq x \leq 2$ no HA or VA

$f''(x)$ + + $f''(0)$ - -

$f'(x)$ - $f'(2)$ + + $f'(\sqrt{2})$ -

$f(x)$ ○ -2 ○ 2 ○



$$f(x) = \frac{2x^2 - 18}{x^2 - 4} \quad f'(x) = \frac{20x}{(x^2 - 4)^2} \quad f''(x) = \frac{-60x^2 - 80}{(x^2 - 4)^3}$$

HA $y = 2$ VA $x = \pm 2$ local min $(0, -9/2)$
no inflection points

$f''(x)$ - und + + und -

$f'(x)$ - - $f'(0)$ + +

$f(x)$ und $9/2$ und

