

Math 2250 Quiz 8.5 (Practice)

Name _____ Section _____

Points will be deducted for untidy or disorganized answers

1. (2 points) Sketch the graph of

$$y = \frac{x}{x^2 + 1},$$

be sure to indicate all local and global extrema and points of inflection.

2. (3 points) If $f(x) = x^{1/3}(x+1)^{2/3}$, then

$$f'(x) = \frac{3x+1}{3x^{2/3}(x+1)^{1/3}} \quad \text{and} \quad f''(x) = \frac{-2}{3x^{5/3}(x+1)^{4/3}}.$$

Use this information to **carefully** graph $y = f(x)$, indicate any asymptotes, local extrema or points of inflection.