

Math 21A, Fall 2024.

Discussion Problems 7 (Tue., Mar. 5)

1. Graph the following functions using the first and the second derivative. Mark all important points on each graph.

(a) $y = (\ln x)^2$ (b) $y = \frac{e^x}{e^x + 1}$ (c) $y = \frac{x^2 - 4}{x + 1}$

2. Assume that f has continuous second derivative and that $f''(x) > 0$ for every x . Can f have a local maximum? Can f have no local minima? Can f have more than one local minimum?