

Name: _____

17.1 Critical Numbers

Exercise 17.1.1 Find the critical numbers of $f(x) = x^3 + 6x^2 + 9x$.

Exercise 17.1.2 Find the critical numbers of $g(t) = t^2e^{-3t}$.

Exercise 17.1.3 Find the critical numbers of $h(x) = \sin(2x) + x$

17.2 Finding Local and Absolute Maximums and Minimums

Exercise 17.2.1 Determine the absolute and local maximums and minimums of $f(x) = \ln(x^2 + x + 1)$ on $[-1, 1]$.

17.3 The Closed Interval Method

Exercise 17.3.1 Determine the absolute and local maximums and minimums of $f(x) = x - 2 \sin(x)$ on $[-2\pi, 2\pi]$.