

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

DEPARTMENT OF MATHEMATICS AND STATISTICS

SECTION 4.4

Math 1000 Worksheet

FALL 2023

For practice only. Not to be submitted.

- Find the maximum and minimum values of each function on the indicated closed interval.
 - $f(x) = x^3 - 9x$, on $-4 \leq x \leq 3$
 - $f(x) = \frac{x^2 + 3}{x + 1}$, on $0 \leq x \leq 4$
 - $f(x) = \sec(x)$, on $-\frac{\pi}{6} \leq x \leq \frac{\pi}{3}$
 - $f(x) = x - 2\cos(x)$, on $-\pi \leq x \leq \pi$ (approximate the maximum and minimum values to two decimal places)
- Consider the function $f(x) = 2 + 6x^2 - 2x^3$.
 - Find the maximum value of $f(x)$ on the open interval $1 < x < 7$.
 - Find the minimum value of $f(x)$ on the open interval $-7 < x < 1$.
- Find the minimum value of $f(x) = \frac{x^2 + 4}{8 - 3x}$ on the open interval $-2 < x < 2$.