

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

DEPARTMENT OF MATHEMATICS AND STATISTICS

SECTION 2.5

Math 2000 Worksheet

WINTER 2020

For practice only. Not to be submitted.

1. Identify all relative extrema and saddle points of the following functions.

(a) $f(x, y) = x^2 + y^2 - xy - 3y$

(b) $f(x, y) = x^3 - 6y^2 + 6xy - 6x$

(c) $f(x, y) = x^6 + y^6 - 6xy + 7$

(d) $f(x, y) = x^3y^2 - 18x^2 - 27y^2$