MEMORIAL UNIVERSITY OF NEWFOUNDLAND

DEPARTMENT OF MATHEMATICS AND STATISTICS

SECTION 2.1 **Math 2000 Worksheet** WINTER 2020

For practice only. Not to be submitted.

1. Given
$$f(x, y) = \frac{\sqrt{x}}{y - 3}$$
evaluate each of the following or explain why the value is undefined.

   (a) $f(4, 7)$
   (b) $f(4, -7)$
   (c) $f(-4, 7)$
   (d) $f(3, 1)$
   (e) $f(1, 3)$
   (f) $f(0, 0)$
   (g) $f(9, 9)$

2. Find and describe the domain of each of the following functions.

   (a) $f(x, y) = \sqrt{x + y}$
   (b) $f(x, y) = \sqrt{x} + \sqrt{y}$
   (c) $f(x, y) = \dfrac{2x - 5y - 1}{xy - 3}$
   (d) $f(x, y) = \sqrt{16 - x^2 - y^2} + \ln(x^2 + y^2 - 1)$