

# MEMORIAL UNIVERSITY OF NEWFOUNDLAND

## DEPARTMENT OF MATHEMATICS AND STATISTICS

---

SECTION 2.2

Math 2000 Worksheet

FALL 2018

---

**For practice only. Not to be submitted.**

1. Evaluate each of the following limits, or show that it does not exist.

(a)  $\lim_{(x,y) \rightarrow (3,-1)} x^2y^3 + 5xy - 4y + 9$

(b)  $\lim_{(x,y) \rightarrow (2,5)} \frac{xy - 4x - 2y + 8}{x^2 - x - 2}$

(c)  $\lim_{(x,y) \rightarrow (0,0)} \frac{4x^2 + \sin^2(y)}{x^2 + y^2}$

(d)  $\lim_{(x,y) \rightarrow (0,0)} \frac{12x^4y}{x^6 + 3y^3}$