

# Math 233 - Quiz 7

March 23, 2023

Name \_\_\_\_\_

Score \_\_\_\_\_

Show all work to receive full credit. Supply explanations when necessary.

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1. (8 points) Find the limit or show that it does not exist.

(a)  $\lim_{(x,y) \rightarrow (0,0)} \frac{5x^3y}{2x^6 + y^2}$

(b)  $\lim_{(x,y) \rightarrow (3,3)} \frac{x^2 - y^2 + x - y}{2x - 2y}$

2. (2 points) Let  $f(x, y, z) = x^2y^3 + 2xyz - 3yz$ . Compute  $f_x(-2, 1, 2)$ .