Name: _____

Calculus 251:C3   Quiz #7 - 6/10/2021   Topic: Sections 14.1-14.2

Instructions. Answer the questions in the spaces provided or on your own paper, then scan and upload to Canvas. Show and label all of your work. Responses with no work may receive no credit even if the answer is correct.

(1) For each function f, describe the countour curves. You should give a complete, concise, and clear English description. You may also sketch several contour curves to support your answer, but the English description is required.

2 pts   (a) $f(x, y) = y - x^2$

2 pts   (b) $f(x, y) = e^{3x+y}$

2 pts   (c) $f(x, y) = \ln(4x^2 + y^2)$

4 pts   (2) Calculate the following limit or show that it does not exist.

$$\lim_{(x,y)\to(0,0)} \frac{x + xy}{\sqrt{x^2 + y^2}}$$