

MATH201-10 Term 141 2014
Quiz 2

Show all of your working out for full marks.

Q1. Identify and sketch the surfaces,

$$(a) \quad 16x^2 + 9z^2 = 4y^2$$

$$(b) \quad z - 1 + x^2 - y^2 = 0$$

Q2. At what points in space is the function, $(x, y, z) = xy \ln \frac{1}{z}$, continuous?

Q3. Find the limit,

$$\lim_{(x,y) \rightarrow (0,0)} \frac{1 - \cos xy}{xy}$$

Q4. Show that the limit,

$$\lim_{(x,y) \rightarrow (1,-1)} \frac{xy + 1}{x^2 - y^2}$$

does not exist.