Math 201-133 Quiz 4 (B)

Name:.....ID#:.....Sec:.....Ser:.....

Q.1: Write name of the surfaces obtained by the following equations.

(a) $2x^2 - 3y^2 + 3z^2 = 1$ _____

(b) $x^2 - y^2 - z^2 = 0$ _____

(c) $x + y^2 + z^2 = 4$ _____

(d) $x^2 - y^2 - z^2 = 1$ _____

Q.2: Find the limit of f as $(x, y) \to (0, 0)$ or show that the limit does not exist for

$$f(x, y) = \frac{3x^2 y}{2x^4 + y^2}$$

Q.3: Show that $f(x, y) = \log(\sqrt{x^2 + y^2})$ satisfy the Laplace equation $\dfrac{\partial^2 f}{\partial x^2} + \dfrac{\partial^2 f}{\partial y^2} = 0$