

Name: _____ I.D.# _____ Serial # _____

Q1: Describe the graph of the level surfaces for $f(x,y,z) = k$, where $f(x,y,z) = \frac{x^2}{4} + y^2 + \frac{z^2}{9}$ and $k = 4, 0, 1$

Q2: Give equivalent cylindrical and spherical coordinates of the point P with rectangular coordinates $P(1, 1, \sqrt{2})$

Q3: Determine if the limit exist $\lim_{x,y \rightarrow 2,0} \frac{y(x-2)}{y^2 - x^2}$