MAT 275

September 7, 2007

Download the Maple worksheet from

`http://math.boisestate.edu/~mead/m275/f07/class2.mw`

and open it in Maple. Use this Maple worksheet to answer the following questions. Hand in the worksheet, with your names, when you are finished. Please reduce the size of the figures before you print.

1. Graph $z = 6 - \left(\frac{x^2}{4} + \frac{y^2}{4}\right)$ by filling in the appropriate ranges for x, y, and z. Hand in one plot that shows the important features.
2. Convert the equation in 1. to cylindrical coordinates and graph by filling in ranges for r, $theta$, and z.
3. Are the graphs in 1. and 2. the same? Which is easier to work with?
4. Graph $x^2 + y^2 + z^2 + 4 * x + 9 * y = 16 * z - 13$, filling in appropriate ranges for x, y, and z. Hand in one plot that shows the important features.
5. Convert the equation in 5. to spherical coordinates. and graph the equation, by filling in ranges for ρ, θ, and ϕ.
6. Are the graphs in 3. and 4. the same? Which is easier to work with?