

MATH 251 (Fall 2009) Hwk on Quadric Surfaces (10.6)

(1) In class on Wed Sept 16 I will hand out a sheet with problems on it. Do the **even numbered problems**. You must explain the reasoning for each match using a complete English sentence. Reasons for a match could include identification of points and/or slices common to both the equation and surface.

Sketch the surfaces in problems (2)-(5). Be sure to correctly represent the scale of the surface in the 3 coordinate directions, by, for example, labeling the points on the surface that intersect the 3 coordinate axes.

(2) $9x^2 + y^2 + z^2 = 9$

(3) $x = 4 - 4y^2 - z^2$

(4) $4x^2 + 9z^2 = 9y^2$

(5) $z^2 - x^2 - y^2 = 1$.