

Homework 4

Math 324F

Advanced Multivariable Calculus

Due on 4th November 2015

Problem 14.6.41 (15 points) Find the equations for the tangent plane and normal line to the surface $2(x-2)^2 + (y-1)^2 + (z-3)^2 = 10$ at the point $(3, 3, 5)$.

Problem 14.6.61 (15 points) Show that the sum of the x , y , and z intercepts of any tangent plane to the surface $\sqrt{x} + \sqrt{y} + \sqrt{z} = \sqrt{c}$ is a constant.