

Math 220 Quiz 2

October 9, 2002

Name: _____

(2001 Exam 1) Consider the function $f : \mathbf{R}^2 \rightarrow \mathbf{R}$ with formula $f(x, y) = \sqrt{x^2 + y^2}$.

(a) (6 points) Find the partial derivatives of f with respect to x and y at the point $\mathbf{a} = (3, 4)$.

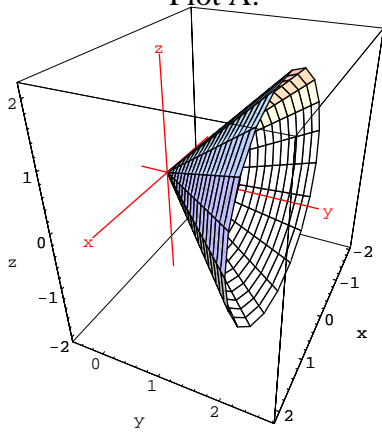
(c) (8 points). Find a scalar equation of the tangent plane to the graph of f at the point $P(3, 4, 5)$.

(b) (6 points) On the reverse side are four computer plots. Which one is the plot of the equation $z = f(x, y)$? Write your answer in the blank, and explain how you deduced it.

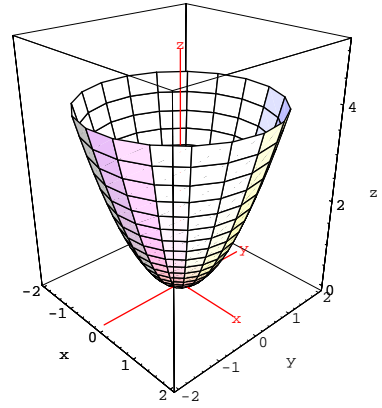
Correct Plot: _____

Reasoning:

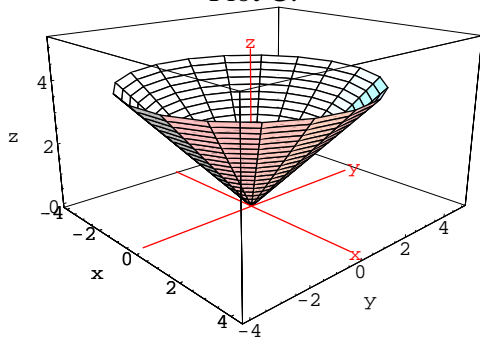
Plot A:



Plot B:



Plot C:



Plot D:

