

Name: _____

This quiz covers: 9.6 and 9.7.

Directions: Complete all questions and **show all applicable work.** Partial credit will be given. All questions are equally weighted.

1.) Let $f(x, y) = e^{x^2+y^2}$.

(a) Evaluate $f(1, 2)$.

(b) Find the domain of f .

(c) Find the range of f .

2.) Describe the surface (point, line, plane, sphere, etc.) of $z = f(x, y)$ and any special characteristics of it (point, direction, normal vector, radius, etc.):

$$f(x, y) = 3x - 2y - 4$$

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3.) Convert the Cartesian point $(x, y, z) = (-2, -2, 1)$ to spherical coordinates.