

King Fahd University of Petroleum and Minerals
Department of Math & Stat
Math 201 Section # 1, 9 (082)
Quiz 2(a)

Time: 20 minutes

Marks: _____/10

Name: _____ Section #: _____

ID #: _____ Serial #: _____

1. Find equation of plane containing $(1, 2, 4)$ and parallel to the plane $3x - 2y + z = 9$.

2. Identify and give a rough sketch of the surface: $z = \sqrt{1 + x^2 + y^2}$.

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Quiz 2(b)

Time: 20 minutes

Marks: _____/10

Name: _____ Section #: _____

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1. Find parametric equations of line through $(2, 1, 0)$ and perpendicular to both $\vec{i} + \vec{j}$ and $\vec{j} + \vec{k}$.

2. Describe traces of the surface $z = x^2 + y^2$ in coordinate planes and give a rough sketch of this surface.

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Quiz 2(c)

Time: 20 minutes

Marks: _____/10

Name: _____ Section #: _____

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1. Find equation of the plane that passes through $(1, 2, 3)$ and contains the line $x = 3t, y = 1 + t, z = 2 - t$.

2. Identify the surface and make a rough sketch:

$$z = (x + 2)^2 + (y - 5)^2 - 3.$$

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Quiz 2(d)

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1. Identify and sketch the quadratic surface: $4z^2 = x^2 + 4y^2$.

2. Check whether the planes are perpendicular or parallel:

$$3x - y + 2z = 6, \quad 6x - 2y + 4z = -4.$$

3. Change the rectangular coordinates $(-1, 1, \sqrt{6})$ to spherical coordinates.