

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics

Math 201 Section#: Serial #: Quiz 2(a) (Term 181)

Name : ID #..... Marks/6

1. Find equation of plane P_1 through $A(3, 0, -3)$ and perpendicular to the vector from the origin to A . What is the angle between planes P_1 and $P_2 : x - y = 1$

2. Identify and sketch the surface $z = \sqrt{x^2 + 2y^2 - 4y + 2x + 3}$

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Math 201 Section#: Serial #: Quiz 2(d) (Term 181)

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1. Find equation of plane P_1 through points $P(0, -2, 5), Q(-1, 3, 1)$ and perpendicular to the plane $2z = 5x + 4y$. What is the intersection of plane P_1 and the xz -plane?

2. Identify and sketch the surface: $x^2 + 4y + 9z^2 = 0$.

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Math 201 Section#: Serial #: Quiz 2(c) (Term 181)

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1. Let

$$L_1 : x = t, y = 2 - t, z = -2 + 2t$$

$$L_2 : x = 3 - s, y = -1 + s, z = -2 + s.$$

(a) Find point of intersection of lines L_1 and L_2 .

(b) Find equation of plane that contains lines L_1 and L_2 .

2. Identify and sketch the surface $z = 6 - x^2 - y^2$.

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Math 201 Section#: Serial #: Quiz 2(b) (Term 181)

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1. Let

$$L_1 : x = 1 + 7t, y = 3 + t, z = 5 - 3t$$

$$L_2 : x = 4 - t, y = 6, z = 7 + 2t.$$

Check whether the lines are perpendicular or parallel or skew.

2. Find distance between the planes: $x - 2y + 3z = 1$ and $-2x + 4y - 6z = 1$.

3. Identify and sketch the surface

$$x^2 - y^2 + z^2 - 4x - 2y + 4 = 0$$