

<p>Kafrelsheikh University Faculty of Education 2nd year Mathematics and basic science Special program</p>	 <p>Research topics Second Term 2019-2020</p>	<p>Subject: Solid Analytic Geometry</p>
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Write on one topic of the following in not less five pages:

- 1- Define three dimensional rectangular coordinates with giving examples.
- 2- Find direction cosines of a line and the angle between two lines.
- 3- Deduce the parametric and the Cartesian equations for the plane.
- 4- Write the Intercept Form and give examples to show how to reduce to the intercept form.
- 5- Find the normal form of the plane with all special cases.
- 6- Deduce the angle between two planes and the perpendicular distance from a plane to a point.
- 7- Find all forms of the line in three-dimensional space.
- 8- Talk with examples about: Traces, the Cylinder.
- 9- Talk with examples about: The cone, the Sphere, the Ellipsoid.
- 10- Talk with examples about: the Hyperboloid of two sheets, the Elliptic Paraboloid, The Hyperbolic Paraboloid.

Dr. Roshdey Mareay