

1 Lecture - MTH101

Important Subjective

1. **What is a coordinate plane? Answer:** A coordinate plane is a two-dimensional plane with two perpendicular number lines, the x-axis and the y-axis, which are used to assign coordinates to points on the plane.
2. **What is the origin in the Cartesian coordinate system? Answer:** The origin is the point where the x-axis and the y-axis intersect and is assigned the coordinates (0,0).
3. **How are coordinates assigned to points on the plane? Answer:** Coordinates are assigned to points on the plane by measuring the distance from the origin along each axis.
4. **What is a graph in Calculus and Analytical Geometry? Answer:** A graph is a visual representation of the relationship between two variables, typically represented by the x and y-axes.
5. **How is a graph created? Answer:** A graph is created by plotting points that correspond to specific values of the independent and dependent variables and then connecting them by a line or curve.
6. **What information can the shape of a graph provide? Answer:** The shape of a graph can provide valuable information about the properties of the function being graphed.
7. **What is a line in Calculus and Analytical Geometry? Answer:** A line is a straight path that extends infinitely in both directions.
8. **How can a line be described using its equation in standard form? Answer:** The equation of a line in standard form is $ax + by = c$, where a, b, and c are constants that define the line's properties.
9. **How can a line be described using its equation in slope-intercept form? Answer:** The equation of a line in slope-intercept form is $y = mx + b$, where m is the slope of the line, and b is the y-intercept.

10. **What is the slope of a line? Answer:** The slope of a line is a measure of how steep it is and is defined as the change in the y-coordinate divided by the change in the x-coordinate.