## 3 Lecture - MTH101

## **Important Subjective**

- What is a coordinate plane? Answer: A coordinate plane is a two-dimensional plane that is divided into four quadrants, labeled I, II, III, and IV. The plane is defined by two perpendicular axes, the x-axis and the yaxis, which intersect at the origin, denoted as (0,0).
- 2. What is the x-axis? Answer: The x-axis is the horizontal axis on a coordinate plane.
- 3. What is the y-axis? Answer: The y-axis is the vertical axis on a coordinate plane.
- 4. What is the origin?

**Answer:** The origin is the point (0,0) on a coordinate plane where the x-axis and the y-axis intersect.

5. What is the slope of a line?

**Answer:** The slope of a line is the ratio of the change in the y-coordinate to the change in the x-coordinate.

- What is the y-intercept?
  Answer: The y-intercept is the point where a line intersects the y-axis.
- 7. What is a linear equation?

**Answer:** A linear equation is an equation that can be written in the form y = mx + b, where m is the slope of the line and b is the y-intercept.

8. What is a quadratic equation?

**Answer:** A quadratic equation is an equation that can be written in the form  $y = ax^2 + bx + c$ , where a, b, and c are constants.

## 9. What is a parabola?

**Answer:** A parabola is a U-shaped curve that is the graph of a quadratic equation.

## 10. How do you find the vertex of a parabola?

**Answer:** The vertex of a parabola can be found by using the formula x = -b/2a to find the x-coordinate, and then plugging that value into the quadratic equation to find the corresponding y-coordinate.