3 Lecture - MTH101

Important Subjective

1. **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 y-axis, 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.

6. **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.