## 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 $y=m x+b$, 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 $y=a x^{\wedge} 2+b x+c$, where $\mathrm{a}, \mathrm{b}$, 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 $x=-b / 2 a$ to find the $x-$ coordinate, and then plugging that value into the quadratic equation to find the corresponding $y$ coordinate.

