1. Linear Equations
   (a) Slope: \[ m = \frac{y_2 - y_1}{x_2 - x_1} \]
   (b) Point-Slope Form: \[ y - y_1 = m(x - x_1) \]
   (c) Slope-Intercept Form: \[ y = mx + b \]
   (d) Standard Form: \[ Ax + By = C \]
   (e) Function Form: \[ f(x) = mx + b \]

2. Quadratic Functions and Equations
   (a) Quadratic Equation: \[ ax^2 + bx + c = 0 \]
   (b) Quadratic Formula: \[ x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \]
   (c) Discriminant: \[ D = b^2 - 4ac \]

3. Parabolas: The graph of \( y = ax^2 + bx + c \) is a parabola.
   (a) If \( a > 0 \), the graph opens up.
   (b) If \( a < 0 \), the graph opens down.
   (c) The vertex is at the point \[ \left( -\frac{b}{2a}, \frac{4ac - b^2}{4a} \right) \].

4. Complex Numbers
   (a) \( i = \sqrt{-1} \)
   (b) \( i^2 = -1 \)