Samples   **Graph of a function**

1. Given the quadratic equation $y = x^2 - 4$:
   (a) Find the roots of $y(x)$.
   (b) Find the y-intercept of $y(x)$.
   (c) Sketch the graph of $y(x)$.

2. Given the quadratic equation $y = -3x^2 - 39x - 90$:
   (a) Find the roots of $y(x)$.
   (b) Find the y-intercept of $y(x)$.
   (c) Sketch the graph of $y(x)$.

3. Given the quadratic equation $y = x^2 + 8x + 12$:
   (a) Find the roots of $y(x)$.
   (b) Find the y-intercept of $y(x)$.
   (c) Sketch the graph of $y(x)$.