

**13** (a) **Graphical:**  $x^2 + 1 = x \Rightarrow x^2 - x + 1 = 0$ . Graph  $Y_1 = X^2 - X + 1$  and locate any  $x$ -intercepts.

Since the graph never intersects the  $x$ -axis, there are no solutions.

(b) **Numerical:** Table  $Y_1 = X^2 - X + 1$  starting at  $x = -1$ , incrementing by  $0.1$ .  $Y_1 \neq 0$ . The minimum value is  $0.75$  when  $x = 0.5$ . There is no solution.

(c) **Symbolic:** The discriminant is  $b^2 - 4ac = (-1)^2 - 4(1)(1) = -3 < 0$ . There is no solution.