

To Solve Graphically:

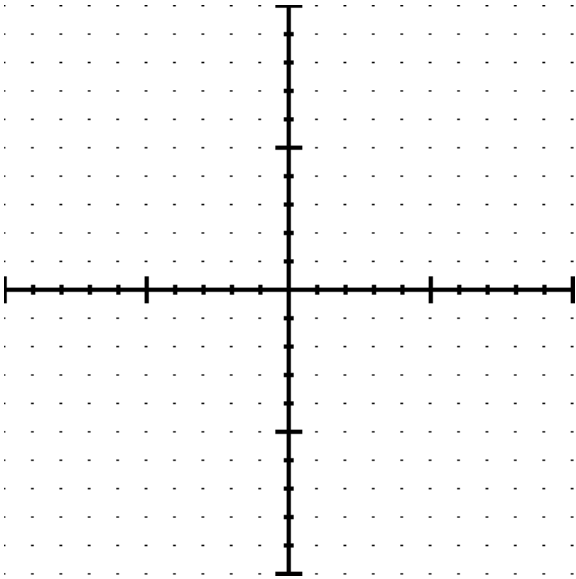
A) Write equation in standard form = 0

$$ax^2 + bx + c = 0$$

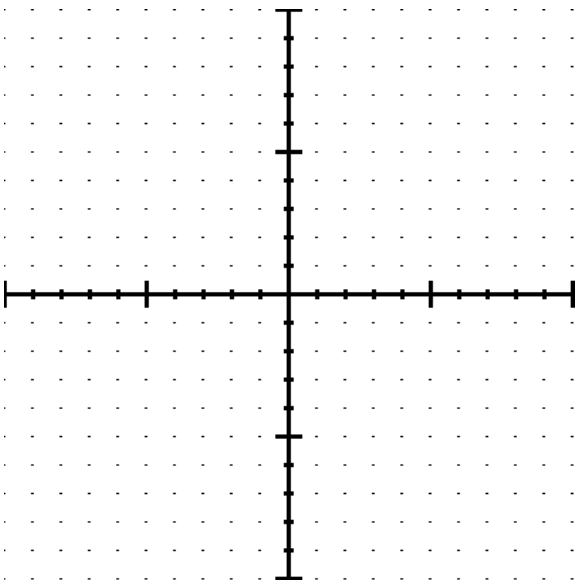
B) Graph  $y = ax^2 + bx + c$

C) Find the x-intercepts (also called *zeros*)

1)  $x^2 + 6x - 7 = 0$

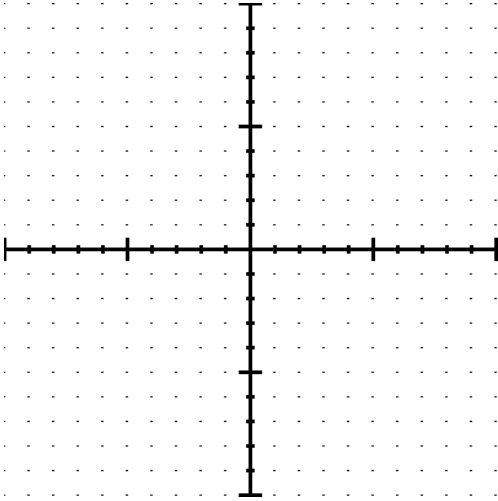


2)  $x^2 - 2x = 3$

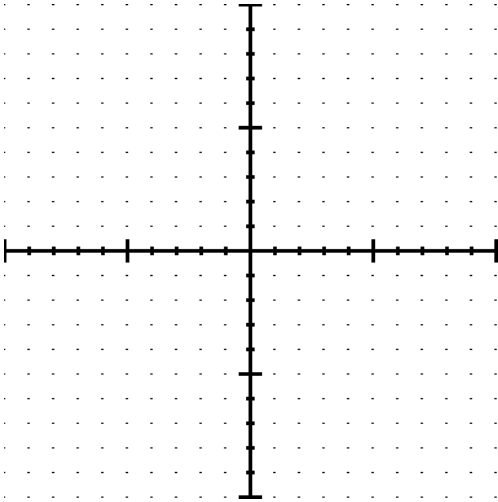


In pairs, solve the following quadratic equations **graphically**. How many solutions did you find? Are you surprised?

3)  $-x^2 + 2x = 1$



4)  $x^2 + 7 = 4x$



5) The path of a soccer ball kicked by Tiffany is **modeled** by the equation  $y = -\frac{1}{2}x^2 + 4x - 1$ . When will the height of the soccer ball (the **y**-value) reach 5 feet?

