

$$\begin{array}{cccccc} a_{11} & a_{12} & \dots & a_{1n} & x_1 & b_1 \\ a_{21} & a_{22} & \dots & a_{2n} & x_2 & b_2 \\ & \vdots & & & \vdots & \vdots \\ a_{m1} & a_{m2} & \dots & a_{mn} & x_n & b_n \end{array} =$$

$$f(x) = \sum_{j=0}^{\infty} \frac{f^{(j)}(0)}{j!} x^j$$

$$\frac{x^2 - 9}{x^2 - 3^2} \\ x - 3x + 3$$

$$\frac{x^2 - 9}{x^2 - 2}$$

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

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

$$x^2 + \frac{b}{a}x = \frac{-c}{a} \quad \text{Divide out leading coefficient.}$$

$$x^2 + \frac{b}{a}x + \frac{b^2}{4a^2} = \frac{-c}{a} + \frac{b^2}{4a^2} \quad \text{Complete the square.}$$

$$\left(x + \frac{b}{2a}\right) \left(x + \frac{b}{2a}\right) = \frac{b^2 - 4ac}{4a^2} \quad \text{Discriminant revealed.}$$

$$\left(x + \frac{b}{2a}\right)^2 = \frac{b^2 - 4ac}{4a^2}$$

$$x + \frac{b}{2a} = \sqrt{\frac{b^2 - 4ac}{4a^2}}$$

$$x = \frac{-b}{2a} \pm \sqrt{\frac{b^2 - 4ac}{4a^2}} \quad \text{There's the vertex formula.}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$