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

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

$\underline{x^2}$ - 9
$\underline{x^2}$ - 3^2
$\overline{x}$ - $3x + 3$

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

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

$$ax^2 + bx \quad = \text{ - c}$$

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

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

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

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

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

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

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