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

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

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

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

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

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

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

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

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

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

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

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

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