When $\(a \ne 0\)$, there are two solutions to $\(ax^2 + bx + c = 0\)$ and they are $$x = {-b \pm \sqrt{b^2-4ac} \over 2a}.$$

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

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

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

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

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

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

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

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

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

$$\begin{pmatrix} 0 & 1 & 0 \\ 0 & 0 & 1 \\ 1 & 0 & 0 \end{pmatrix}$$

$$4.56 + 4.56 + \tfrac{4}{5} + 4 + 5i + 4.56e^{4.56i} + \pi + \wp + \wp + \hat{i} + \hat{i} + \gamma + \infty$$

$$17 + 29i \in \mathbb{C} \qquad\qquad \int_0^1 \frac{\mathrm{dx}}{(a+1)\sqrt{x}} = \pi$$

$$\int_{\mathrm{E}} \left(\alpha f + \beta g \right) \, \mathrm{d} \, \mu = \alpha \, \int_{\mathrm{E}} \, f \, \mathrm{d} \, \mu + \beta \, \int_{\mathrm{E}} \, g \, \mathrm{d} \, \mu$$

$$A = \begin{pmatrix} 9 & 8 & 6 \\ 1 & 2 & 7 \\ 4 & 9 & 2 \\ 6 & 0 & 5 \end{pmatrix} \ \text{or} \ A = \begin{bmatrix} 9 & 8 & 6 \\ 1 & 2 & 7 \\ 4 & 9 & 2 \\ 6 & 0 & 5 \end{bmatrix}$$

$$\begin{bmatrix} a_{11} - \lambda & \cdots & a_{1\mathrm{n}} \\ \vdots & \ddots & \vdots \\ a_{\mathrm{n}1} & \cdots & a_{\mathrm{nn}} - \lambda \end{bmatrix} \begin{bmatrix} x_1 \\ \vdots \\ x_{\mathrm{n}} \end{bmatrix} = 0$$

$$\sqrt{x-3} + \sqrt{3x} + \sqrt{\frac{\sqrt{3x}}{x-3}} + i \frac{y}{\sqrt{2(r+x)}}$$

$$\sum_{n=0}^{t} f(2n) + \sum_{n=0}^{t} f(2n+1) = \sum_{n=0}^{2t+1} f(n)$$

$$\sqrt{x^2} = |x| = \begin{cases} +\mathrm{x} & , \text{if} \ x > 0 \\ 0 & , \text{if} \ x = 0 \\ -\mathrm{x} & , \text{if} \ x < 0 \end{cases}$$

$$H(j\omega) = \begin{cases} x^{-j\omega\sigma_0} & \text{for} \ | \ \omega \ | < \omega_\sigma \\ 0 & \text{for} \ | \ \omega \ | \quad \omega_\sigma \end{cases} \qquad x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$f'(a) = \lim_{\mathrm{h} \to 0} \frac{f(a+h) - f(a)}{h}$$

$$+ \sum_{k=1}^{\infty} \frac{q^{k+k^2}}{(1-q)(1-q^2)\dots(1-q^k)} = \prod_{j=0}^{\infty} \frac{1}{(1-q^{5j+2})(1-q^{5j+3})}, \text{ for } |q| <$$