

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

$ax^2 + bx + c = 0$   $ax^2 + bx = -c$   $x^2 + \frac{b}{a}x = -\frac{c}{a}$  Divide out leading coefficient.  $x^2 + \frac{b}{a}x + \frac{b^2}{4a^2} = -\frac{c}{a} + \frac{b^2}{4a^2}$  Complete the square.  $(x + \frac{b}{2a})^2 = \frac{b^2}{4a^2} - \frac{4ac}{4a^2}$  Discriminant revealed.  $(x + \frac{b}{2a})^2 = \frac{b^2 - 4ac}{4a^2}$   $x + \frac{b}{2a} = \pm \sqrt{\frac{b^2 - 4ac}{4a^2}}$  There's the vertex formula.  $x = -\frac{b}{2a} \pm \sqrt{\frac{b^2 - 4ac}{4a^2}}$

010001100

4.564545454.564.56  $\pi e e i i \gamma \infty$

1729

$\int_0^1 dx (a+1)^x = \pi$

$\int E(\alpha f + \beta g) d\mu = \alpha \int E f d\mu + \beta \int E g d\mu$

$A = (986127492605)$  or  $A = [986127492605]$

$[a_{11} - \lambda \cdots a_{1n} \vdots \vdots \vdots a_{n1} \cdots a_{nn} - \lambda] \begin{bmatrix} x_1 \\ \vdots \\ x_n \end{bmatrix} = 0$

$x-3+3x+3xx-3+iy^2(r+x)$

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

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

$H(j\omega) = \begin{cases} x-j\omega\sigma & 0 \text{ for } |\omega| < \omega\sigma \\ 0 & \text{for } |\omega| \geq \omega\sigma \end{cases}$

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

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

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