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17 29

4.56 4.56 4 5 4 5 4.56 4.56 π e e i i γ ∞

22 7 π

$a_{11} a_{12} \dots a_{1n} a_{21} a_{22} \dots a_{2n} ; a_{m1} a_{m2} \dots a_{mn} x_1 x_2 ; x_n = b_1 b_2 ; b_n$

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

$x^2 - 9 = x^2 - 3^2 = x - 3 \quad x + 3$

$x^2 - 9 = x^2 - \boxed{3}^2$

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