0 1 0 0 0 1 1 0 0 17 29 4.56 4.56 4 5 4 5 4.56 4.56 π ℯ ℯ ⅈ ⅈ γ ∞ 22 7 π a 1 1 a 1 2 … a 1 n a 2 1 a 2 2 … a 2 n ⋮ a m 1 a m 2 … a m n x 1 x 2 ⋮ x n = b 1 b 2 ⋮ b n f x = ∑ j = 0 ∞ f j 0 j ! x j x 2 - 9 = x 2 - 3 2 = x - 3 x + 3 x 2 - 9 = x 2 - 3 2

a x 2 + b x + c = 0 a x 2 + b x = - c x 2 + b a x = - c a Divide out leading coefficient. x 2 + b a x + b 2 a 2 = - c (4 a) a (4 a) + b 2 4 a 2 Complete the square. (x + b 2 a) (x + b 2 a) = b 2 - 4 a c 4 a 2 Discriminant revealed. (x + b 2 a) 2 = b 2 - 4 a c 4 a 2 x + b 2 a = b 2 - 4 a c 4 a 2 x = - b 2 a ± { C } b 2 - 4 a c 4 a 2 There's the vertex formula. x = - b ± { C } b 2 - 4 a c 2 a