

## Factoring Polynomials

No Calculator

Khan Academy Link: <https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-quadratics-1/v/factoring-polynomials-1>

Factor the following polynomials into binomials

1.  $x^2 + 2x + 1$
2.  $x^2 + 11x + 28$
3.  $x^2 + 13x + 36$
4.  $x^2 - 18x + 81$
5.  $x^2 + 18x + 81$
6.  $x^2 + 4x + 3$
7.  $x^2 + 3x + 2$
8.  $x^2 + 6x + 5$
9.  $x^2 - 3x - 28$
10.  $x^2 + 8x + 12$
11.  $x^2 + 11x + 18$
12.  $x^2 + 17x + 72$
13.  $x^2 + 5x + 6$
14.  $x^2 - 3x + 2$
15.  $x^2 - 5x - 6$
16.  $x^2 - 12x + 27$
17.  $x^2 + 2x + 1$
18.  $x^2 + 2x - 35$
19.  $x^2 + 14x + 45$
20.  $x^2 + x - 30$

Answers:

1.  $(x + 1)(x + 1)$
2.  $(x + 7)(x + 4)$
3.  $(x + 4)(x + 9)$
4.  $(x - 9)(x - 9)$
5.  $(x + 9)(x + 9)$
6.  $(x + 1)(x + 3)$
7.  $(x + 2)(x + 1)$
8.  $(x + 5)(x + 1)$
9.  $(x + 4)(x - 7)$
10.  $(x + 2)(x + 6)$
11.  $(x + 2)(x + 9)$
12.  $(x + 8)(x + 9)$
13.  $(x + 2)(x + 3)$
14.  $(x - 2)(x - 1)$
15.  $(x + 1)(x - 6)$
16.  $(x - 3)(x - 9)$
17.  $(x + 1)(x + 1)$
18.  $(x - 5)(x + 7)$
19.  $(x + 9)(x + 5)$
20.  $(x - 5)(x + 6)$