The method: Factoring trinomials

For $x^2 + bx + c$, find two numbers that multiply to c and add to b.

$x^2 + x - 30 = (x - 5)(x + 6)$

Multiply to −30, add to 1: −5 and 6 check: $-5 \times 6 = -30$

$x^2 + 17x + 72 = (x + 9)(x + 8)$

Multiply to 72, add to 17: 9 and 8 check: $9 \times 8 = 72$

Problems 1 and 2 worked out · Version 0A

$x^2 + 11x + 18 = (x + 9)(x + 2)$

Multiply to 18, add to 11: 9 and 2 check: $9 \times 2 = 18$

$x^2 + 5x - 14 = (x + 7)(x - 2)$

Multiply to −14, add to 5: 7 and −2 check: $7 \times (-2) = -14$

Factoring trinomials · Version 0A

1) $(x + 9)(x + 2)$ 2) $(x + 7)(x - 2)$
3) $(x - 2)(x - 9)$ 4) $(x + 4)(x - 6)$
5) $(x - 7)(x + 3)$ 6) $(x - 5)(x - 9)$
7) $(x + 6)(x - 5)$ 8) $(x + 6)(x - 6)$
9) $(x + 2)(x + 6)$ 10) $(x - 3)(x - 5)$
11) $(x + 5)(x + 6)$ 12) $(x - 9)(x - 5)$
13) $(x + 1)(x + 7)$ 14) $(x + 7)^2$ 15) $(x + 6)(x + 7)$
16) $(x + 9)(x + 5)$ 17) $(x - 8)(x - 3)$
18) $(x + 4)(x + 1)$ 19) $(x - 4)(x - 5)$
20) $(x - 2)(x + 6)$ 21) $(x + 9)^2$ 22) $(x - 1)(x - 9)$
23) $(x + 1)(x + 4)$ 24) $(x + 3)(x - 7)$
25) $(x + 8)(x + 1)$ 26) $(x - 3)(x + 7)$
27) $(x + 4)(x - 7)$ 28) $(x - 5)(x + 7)$
29) $(x + 2)(x - 9)$ 30) $(x + 5)(x + 2)$
31) $(x + 7)(x + 2)$ 32) $(x + 5)(x - 5)$
33) $(x - 6)(x - 9)$ 34) $(x - 1)(x + 3)$
35) $(x - 6)(x + 3)$ 36) $(x - 6)(x - 4)$
37) $(x + 1)(x - 8)$ 38) $(x + 6)(x - 4)$
39) $(x + 3)(x - 2)$ 40) $(x - 9)(x + 6)$
41) $(x - 9)(x - 7)$ 42) $(x - 1)(x + 2)$