

Factoring

Addition Method

$$ax^2 + bx + c ; a = 1$$

Strategy

1. Find factors of c
2. Determine which of those factors sum is b
3. Rewrite polynomial as factors

Example

$$x^2 + 11x + 24$$

1. Factors of 24

?

24

2. Sum is 11

24 1

3. $(x + 8)(x + 3)$

12 2

8 3

6 4

$$x^2 + 9x + 20$$

$$x^2 + 8x + 12$$

$$x^2 + 13x + 42$$

$$x^2 + 10x + 16$$

$$x^2 + 5x + 6$$

$$x^2 + 11x + 10$$

$$x^2 - x - 20$$

$$x^2 + x - 20$$

$$x^2 - 2x - 24$$

$$x^2 - 4x - 21$$

$$x^2 - x - 2$$

$$x^2 + 7x - 30$$

$$x^2 - 7x + 10$$

$$x^2 - 9x + 20$$

$$x^2 - 3x + 2$$

$$x^2 - 7x + 6$$

$$x^2 - 12x + 32$$

$$x^2 - 10x + 24$$

$$x^2 + 11x + 28$$

$$x^2 - 3x - 28$$

$$x^2 - 15x + 50$$