

Factoring $ax^2 \pm bx + c$

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|------------------------|----------------------|-----------------------------------|---------------------------|
| 1. $2x^2 + 11x + 12$ | $= (x + 4)(2x + 3)$ | 25. $9x^2y^2 - 48x^2y + 48x^2$ | $= 3x^2(y - 4)(3y - 4)$ |
| 2. $2x^2 + 5x + 2$ | $= (x + 2)(2x + 1)$ | 26. $6m^2n - 26mn + 24n$ | $= 2n(m - 3)(3m - 4)$ |
| 3. $3x^2 + 4x + 1$ | $= (x + 1)(3x + 1)$ | 27. $9x^2 - 24x + 16$ | $= (3x - 4)(3x - 4)$ |
| 4. $2x^2 + 3x + 1$ | $= (x + 1)(2x + 1)$ | 28. $20x^3y^2 - 4x^2y^2 + 84xy^2$ | $= 4xy^2(5x^2 - x + 2)$ |
| 5. $3x^2 + 13x + 4$ | $= (x + 4)(3x + 1)$ | 29. $3a^2 + 10ab + 3b^2$ | $= (a + 3b)(3a + b)$ |
| 6. $3x^2 + 19x + 28$ | $= (x + 4)(3x + 7)$ | 30. $18a^2 - 12a + 2$ | $= 2(3a - 1)(3a - 1)$ |
| 7. $6x^2 + 11x + 3$ | $= (2x + 3)(3x + 1)$ | 31. $4y^3 - 7y^2 + 3y$ | $= y(y - 1)(4y - 3)$ |
| 8. $6x^2 + 17x + 12$ | $= (2x + 3)(3x + 4)$ | 32. $98x^2 - 28x + 2$ | $= 2(7x - 1)(7x - 1)$ |
| 9. $4x^2 + 19x + 21$ | $= (x + 3)(4x + 7)$ | 33. $8x^3 - 72x^2 + 162x$ | $= 2x(2x - 9)(2x - 9)$ |
| 10. $8x^2 + 10x + 3$ | $= (2x + 1)(4x + 3)$ | 34. $10 - 19a + 6a^2$ | $= (2a - 5)(3a - 2)$ |
| 11. $2x^2 + 13x + 15$ | $= (x + 5)(2x + 3)$ | 35. $9y^2 - 31 + 12$ | $= (y - 3)(9y - 4)$ |
| 12. $6x^2 + 25x + 14$ | $= (2x + 7)(3x + 2)$ | 36. $12 - 31x + 20x^2$ | $= (4x - 3)(5x - 4)$ |
| 13. $2x^2 - 11x + 12$ | $= (x - 4)(2x - 3)$ | 37. $6p^2 + 13pq + 6q^2$ | $= (2p + 3q)(3p + 2q)$ |
| 14. $3x^2 - 14x + 8$ | $= (x - 4)(3x - 2)$ | 38. $3x^2 - 10xy + 8y^2$ | $= (x - 2y)(3x - 4y)$ |
| 15. $6x^2 - 19x + 10$ | $= (2x - 5)(3x - 2)$ | 39. $9a^2 - 18ab + 5b^2$ | $= (3a - b)(3a - 5b)$ |
| 16. $2x^2 - 11x + 15$ | $= (x - 3)(2x - 5)$ | 40. $2r^4 - 11r^2p + 15p^2$ | $= (2r^2 - 5p)(r^2 - 3p)$ |
| 17. $3x^2 - 22x + 7$ | $= (x - 7)(3x - 1)$ | | |
| 18. $4x^2 - 23x + 15$ | $= (x - 5)(4x - 3)$ | | |
| 19. $8x^2 - 14x + 3$ | $= (2x - 3)(4x - 1)$ | | |
| 20. $14x^2 - 13x + 3$ | $= (2x - 1)(7x - 3)$ | | |
| 21. $3x^2 - 16x + 16$ | $= (x - 4)(3x - 4)$ | | |
| 22. $10x^2 - 29x + 10$ | $= (2x - 5)(5x - 2)$ | | |
| 23. $6x^2 - 17x + 12$ | $= (2x - 3)(3x - 4)$ | | |
| 24. $32x^2 - 20x + 3$ | $= (4x - 1)(8x - 3)$ | | |