

Factoring

Of the form $ax^2 \pm bx \pm c$

1. $2x^2 + 3x + 1 = (2x + 1)(x + 1)$
2. $3x^2 + 7x + 2 = (3x + 1)(x + 2)$
3. $5x^2 + 17x + 6 = (5x + 2)(x + 3)$
4. $6y^2 + 17y + 10 = (6y + 5)(y + 2)$
5. $2x^2 + 7x + 5 = (2x + 5)(x + 1)$
6. $4x^2 + 13x + 3 = (4x + 1)(x + 3)$
7. $3a^2 + 8a + 4 = (3a + 2)(a + 2)$
8. $9x^2 + 15x + 4 = (3x + 4)(3x + 1)$
9. $9c^2 + 18c + 8 = (3c + 4)(3c + 2)$
10. $35x^2 + 34x + 8 = (5x + 2)(7x + 4)$
11. $21x^2 + 37x + 12 = (7x + 3)(3x + 4)$
12. $10d^2 + 23d + 12 = (5d + 4)(2d + 3)$
13. $4x^2 - 13x + 3 = (4x - 1)(x - 3)$
14. $12z^2 - 7z + 1 = (3z - 1)(4z - 1)$
15. $3z^2 - 10z + 8 = (3z - 4)(z - 2)$
16. $12x^2 - 17x + 6 = (4x - 3)(3x - 2)$
17. $20y^2 - 23y + 6 = (5y - 2)(4y - 3)$
18. $6b^2 - 23b + 7 = (3b - 1)(2b - 7)$
19. $24x^2 - 47x + 20 = (8x - 5)(3x - 4)$
20. $4y^2 - 21y + 27 = (4y - 9)(y - 3)$
21. $15x^2 - 26x + 8 = (5x - 2)(3x - 4)$
22. $8f^2 - 26f + 21 = (4f - 7)(2f - 3)$
23. $12y^2 - 44y + 35 = (6y - 7)(2y - 5)$
24. $12x^2 - 11x + 2 = (4x - 1)(3x - 2)$
25. $4x^2 + 11x - 3 = (4x - 1)(x + 3)$
26. $10a^2 + 3a - 4 = (5a + 4)(2a - 1)$
27. $5y^2 + 33y - 56 = (5y - 7)(y + 8)$
28. $84e^2 + e - 15 = (12e - 5)(7e + 3)$
29. $9x^2 + 6x - 8 = (3x - 2)(3x + 4)$
30. $4z^2 + 4z - 15 = (2z - 3)(2z + 5)$
31. $5x^2 + 2x - 3 = (5x - 3)(x + 1)$
32. $15y^2 + 4y - 3 = (5y + 3)(3y - 1)$
33. $24r^2 + 2r - 15 = (6r + 5)(4r - 3)$
34. $6y^2 - 5y - 25 = (3y + 5)(2y - 3)$
35. $8y^2 - 28y - 16 = 4(2y^2 - 7y - 4) = 4(2y + 1)(y - 4)$

$$36. 18y^3 - 3y^2 - 10y = y(18y^2 - 3y - 10) = y(6y - 5)(3y + 2)$$

$$37. 6y^2 - y - 15 = (3y - 5)(2y + 3)$$

$$38. 18x^2 - 6x - 24 = 6(3x^2 - 1x - 4) = 6(3x - 4)(x + 1)$$

$$39. 24x^2 - 47x - 2 = (24x + 1)(x - 2)$$

$$40. 3y^2 - 16y - 12 = (3y + 2)(y - 6)$$

$$41. 10x^2 - 7x - 12 = (5x + 4)(2y - 3)$$

$$42. 3x^3 - 5x^2 - 2x = x(3x^2 - 5x - 2) = x(3x + 1)(x - 2)$$

$$43. 15y^2 - 19y - 10 = (5y + 2)(3y - 5)$$

$$44. 2t^2 - 3t - 14 = (2t - 7)(t + 2)$$

$$45. 16x^2 - 6x - 27 = (8x + 9)(2x - 3)$$

$$46. 12x^2 - 33x - 9 = 3(4x^2 - 11x - 3) = 3(4x + 1)(x - 3)$$

$$47. 24y^2 - 20y - 4 = 4(6y^2 - 5y - 1) = 4(6y + 1)(y - 1)$$

$$48. 30t^2 - 5t - 60 = 5(6t^2 - t - 12) = 5(3t + 4)(2y - 3)$$

$$49. 4x^2 + 16xy + 15y^2 = (2x + 5y)(2x + 3y)$$

$$51. 25c^2 + 10cd - 8d^2 = (5c - 2d)(5c + 4d)$$

$$52. 49x^2 - 21xy - 10y^2 = (7x - 5y)(7x + 2y)$$

$$53. 6a^2b^2 - abc - 40c^2 = (3ab - 8c)(2ab + 5c)$$

$$54. 12x^2 - 19xy - 21y^2 = (4x + 3y)(3x - 7y)$$

$$55. 70x^2 - 83xy + 18y^2 = (7x - 2y)(10x - 9)$$

$$56. 40b^2 + 31bc + 6c^2 = (5b + 2c)(8b + 3c)$$

$$57. 35x^2 + 43xyz + 12y^2z^2 = (5x + 4yz)(7x + 3yz)$$

$$58. 36x^2 - 37xyz + 7y^2z^2 = (4x - 1yz)(9x - 7yz)$$

$$59. 18x^6 - 35x^3 + 12 = (2x^3 - 3)(9x^3 - 4)$$

$$60. 21c^4 + 19c^2d - 12d^2 = (3c + 4d)(7c - 3d)$$

$$61. 2(x + y)^2 + (x + y) - 3 = [2(x + y) + 3][2(x + y) - 1]$$

$$62. 8x^2(x + 1) + 2x(x + 1) - 3(x + 1) = [4x(x + 1) + 3][2x(x + 1) - 1]$$

$$63. 12x^2(x-2) - 29x(x-2) + 15(x-2) = [3x(x-2) - 5][4x(x-2) - 3]$$

$$64. 3x^2 - 10x - 8 = (3x+2)(x-4)$$

$$65. 15x^2 + 19x - 10 = (5x-2)(3x+5)$$

$$66. 8x^2 + 10x - 3 = (4x-1)(2x+3)$$

$$67. 12x^2 + 4x - 21 = (2x+3)(6x-7)$$

$$68. 6x^2 - x - 15 = (2x+3)(3x-5)$$

$$69. 6x^2 + 25x - 25 = (x+5)(6x-5)$$

$$70. 20a^2 - 13a - 21 = (4a+3)(5a-7)$$

$$71. 24x^2 + 22x - 10 = 2(12x^2 + 11x - 5) = 2(3x-1)(4x+5)$$

$$72. 24x^2 - 6x - 9$$

$$73. 10x^2 - 13x - 77$$

$$74. 6m^4 + 11m^3 - 10m^2$$

$$75. 12x^2 + 22x - 14$$

$$76. 15x^2 - 19x + 6$$

$$77. 15x^2 + 19x + 6$$

$$78. 15x^2 - 9x - 6$$

$$79. 15x^2 - 33x + 6$$

$$80. 15x^2 - 21x + 6$$

$$81. 15x^2 - 23x + 6$$

$$82. 12x^2 + 7xy - 12y^2$$

$$83. 3x^2 - 2xy - 5y^2$$

$$84. 12a^2 - 8ab - 15b^2$$

$$85. 20x^2 + 18xy - 35y^2$$

$$86. 56m^2 - 19mn - 15n^2$$

$$87. 28x^2 + 3xy - 6y^2$$

$$88. 20x^4 - 27x^2 - 18$$

$$89. 12x^4 + 17x^2 - 5$$

$$90. 32x^4 - 2x^2y^2 - 9y^4$$

$$91. 15a^2 + 40a + 20$$

$$92. 18x^2 + 30x + 8$$

$$93. 27c^2 + 54c + 24$$

$$94. 16x^2 - 52x + 12$$

$$95. 24z^2 - 14z + 2$$

$$96. 18z^2 - 60z + 48$$

$$97. -18x^2 - 12x + 16$$

$$98. -12z^2 - 12z + 60$$

$$99. -20x^2 - 55x + 15$$

$$100. -3y^2 + 16y + 12$$

$$101. -20x^2 + 14x + 24$$

$$102. 3x^4 - 5x^3 - 2x^2$$

$$103. 8(z-1)^2 + 8(z-1) - 30$$

$$104. 18(y+3)^2 - 3(y+3) - 45$$

$$105. 6(x^2 - 3x + 1)^2 + 14(x^2 - 3x + 1) + 4$$

$$106. -15(2x-3)^2 - 6(2x-3) + 9$$