

# Factor completely

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1.  $x^2 + 3x - 4$

2.  $x^2 + 2x - 6$

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

4.  $x^2 - 8x + 16$ 

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5.  $x^2 - 8x - 10$

6.  $x^2 - 49$

7.  $x^2 + 3x - 10$

8.  $a^2 - a - 6$ 

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9.  $2x^2 - 98$

10.  $x^2 - 3x - 10$

11.  $x^2 - 11x + 24$

12.  $x^2 + 11x + 24$ 

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13.  $3y - 21 + xy - 7x$

14.  $25x^2 - 70xy + 49y^2$

15.  $6x^3 - 6x^2 - 120x$

16.  $x^2y - y^3$ 

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17.  $x^2 + 14x - 32$

18.  $-x^2 + 6x - 8$

19.  $7(x - y) + y(x - y)$

20.  $7x^2 + 19x - 6$ 

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21.  $216y^3 - z^3$

22.  $27a^3b^3 + 8$

23.  $x^3 - 2x^2 - 36x + 72$

24.  $36x^2y^2 - 60xy + 25$ 

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25.  $a - b + x(a - b)$

26.  $2x^3y + 8x^2y^2 - 10xy^3$

27.  $6x^2 - 13x + 6$

28.  $100x^2 + 70x + 49$ 

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29.  $100t^2 - \frac{1}{100}$

30.  $36 - 13x^2 + x^4$

31.  $28 - 13x - 6x^2$

32.  $x^2 + 11x + 24$ 

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33.  $q^2 - 121$

34.  $m^2 - 625$

35.  $(x + 7)^2 - y^2$

36.  $x^2(x + 3) - 9(x + 3)$ 

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37.  $4x^2y - 6xy^2$

38.  $125x^3 + 27$

39.  $16x^4 - 1$

40.  $x^3 - 3x^2 - 9x + 27$ 

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$$41. 16x^2 + y^2$$

$$42. 6x^2y^2 - 3xy^3$$

$$43. 3a^2 + 9ab + 3b^2 + ab$$

$$44. x^2 + 4xy - 12y^2$$

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$$45. x^2 + x + 2$$

$$46. -16t^2 + 440t$$

$$47. x^2 - 36x + 35$$

$$48. 5xy^2 - 2xy - 7x$$

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$$49. x^2 - 5x + 4$$

$$50. 9x^2 - 24x + 16$$

$$51. 36a^2 - 49b^2$$

$$52. 125x^3 - 216y^3$$

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$$53. 36p^2 - 25$$

$$54. 20z^2 + 7z + 1$$

$$55. 33 + 14x + x^2$$

$$56. (2x + 5)(5x^2 - 3) - (2x + 5)(x^2 + 22)$$

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$$57. 25x^2 + 10xy + 4y^2$$

$$58. 36x^2 + 25$$

$$59. x^2 + 5x + 14$$

$$60. 27x^3 + 125y^3$$

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$$61. 343x^3 - 1000$$

$$62. 64x^2 - 112xy + 49y^2$$

$$63. x^4 - 13x^2 + 36$$

$$64. x^2(2x - 3) + 6x(2x - 3) + 9(2x - 3)$$

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$$65. 100p^2 - 25p$$

$$66. 81x^4 - y^4$$

$$67. x^8 - 256$$

$$68. (2x + 5)(5x^2 + 15x) - (2x + 5)(x^2 - 5x - 25)$$

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$$69. 49x^2 - 70xy + 25y^2$$

$$70. 16x^4 - 625$$

$$71. 54x^3 - 250y^3$$

$$72. 9x^3y - 64xy^3$$

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$$73. 64 - 49x^2$$

$$74. x^2(3x - 5) - 9(3x - 5)$$

$$75. 25y^4 - 64x^4$$

$$76. 36x^3 - 120x^2 + 100x$$

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$$77. 3x^2 - 16x - 12$$

$$78. 10x^2 - 12 + 7x$$

$$79. 12x^2 + 23x + 5$$

$$80. 6x^2 - 13x + 5$$

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