

Factoring

1. $2x+8 = 2(x+4)$ 2. $3y-12 = 3(y-4)$ 3. $4p-8 = 4(p-2)$ 4. $5z-10 = 5(z-2)$
5. $12-3x = 3(4-x)$ 6. $8-2y = 2(4-y)$ 7. $20-5x = 5(4-x)$ 8. $15-3t = 3(5-t)$
9. $4x+15 = 3(3x+5)$ 10. $30+10x = 10(3+x)$ 11. $6x+12 = 6(x+2)$ 12. $15+3q = 3(5+q)$
13. $14x-7 = 7(2x-1)$ 14. $11-22x = 11(1-2x)$ 15. $4r-16 = 4(r-4)$ 16. $20-12a = 4(5-3a)$
17. $24x+8 = 8(3x+1)$ 18. $5a-15 = 5(a-3)$ 19. $6t+18 = 6(t+3)$ 20. $3w-21 = 3(w-7)$
21. $3x+12 = 3(x+4)$ 22. $4+20a = 4(1+5a)$ 23. $7-14b = 7(1-2b)$ 24. $16a-4 = 4(4a-1)$
25. $8b+16 = 8(b+2)$ 26. $4x+6 = 2(2x+3)$ 27. $12a-8 = 4(3a-2)$ 28. $14p-21 = 7(2p-3)$
29. $6r+15 = 3(2r+5)$ 30. $24-20q = 4(6-5q)$ 31. $16+12r = 4(4+3r)$ 32. $33a+9 = 3(11a+3)$
33. $36b-24 = 12(3b-2)$ 34. $20q-12 = 4(5q-3)$ 35. $40-30w = 10(4-3w)$ 36. $18r+12 = 6(3r+2)$
37. $16+20b = 4(4+5b)$ 38. $25a-15 = 5(5a-3)$ 39. $35p-25 = 5(7p-5)$ 40. $32y-12 = 4(8y-3)$
41. $6x+3y = 3(2x+y)$ 42. $8a-12b = 4(2a-3b)$ 43. $2x-4y = 2(x-2y)$ 44. $14a-7b = 7(2a-b)$
45. $20d-10e = 10(2d-e)$ 46. $3a+6b = 3(a+2b)$ 47. $5x-15y = 5(x-3y)$ 48. $5w-10x = 5(w-2x)$
49. $12a-3b = 3(4a-b)$ 50. $8u-2y = 2(4u-y)$ 51. $4t-16u = 4(t-4u)$ 52. $11x+22y = 11(x+2y)$
53. $14d-7e = 7(2d-e)$ 54. $15w-3x = 3(5w-x)$ 55. $6x+12y = 6(x+2y)$ 56. $12r-18t = 6(2r-3t)$
57. $6x+9y = 3(2x+3y)$ 58. $15e-12f = 3(5e-4f)$ 59. $24g+16h = 8(3g+2h)$ 60. $10w-25x = 5(2w-5x)$
61. $30r-20t = 10(3r-2t)$ 62. $12a-16b = 4(3a-4b)$ 63. $18c-24d = 6(3c-4d)$ 64. $30d+36e = 6(5d+6e)$
65. $28p-21q = 7(4p-3q)$ 66. $ab-2a = a(b-2)$ 67. $3pq-q = p(3q-1)$ 68. $8ab+3b = b(8a+3)$
69. $ac+c = c(a+1)$ 70. $2y+3x = x(y+3)$ 71. $5ab-7b = b(5a-7)$ 72. $lmn+3n = n(lm+3)$

$$\textcircled{73} \quad \frac{2q - 3pq}{q(2 - 3p)}$$

$$\textcircled{74} \quad \frac{6xc + 13xy}{x(6 + 13y)}$$

$$\textcircled{75} \quad \frac{5ab + 7a}{a(5b + 7)}$$

Exercise 2

$$\textcircled{1} \quad \frac{3a + 12ab}{3a(1 + 4b)}$$

$$\textcircled{2} \quad \frac{3y - 15xy}{3y(1 - 5x)}$$

$$\textcircled{3} \quad \frac{4p - 8pq}{4p(1 - 2q)}$$

$$\textcircled{4} \quad \frac{5z - 20xyz}{5(z - 4xyz)}$$

$$\textcircled{5} \quad \frac{12xy - 3x}{3x(4y - 1)}$$

$$\textcircled{6} \quad \frac{7ab + 14b}{7b(a + 2)}$$

$$\textcircled{7} \quad \frac{6xy - 4y}{3y(2x - 3)}$$

$$\textcircled{8} \quad \frac{12pq + 15q}{3q(4p + 5)}$$

$$\textcircled{9} \quad \frac{4ep - 8f}{4f(e - 2p)}$$

$$\textcircled{10} \quad \frac{5xy + 15y}{5y(x + 3)}$$

$$\textcircled{11} \quad \frac{3er + 18f}{3f(e + 6)}$$

$$\textcircled{12} \quad \frac{21a - 7pq}{7a(3 - p)}$$

$$\textcircled{13} \quad \frac{30r + 3rs}{3r(10 + s)}$$

$$\textcircled{14} \quad \frac{21xz - 3xyz}{12x(2 - 3y)}$$

$$\textcircled{15} \quad \frac{18a + 21ab}{3a(6 + 7b)}$$

$$\textcircled{16} \quad \frac{5ab + 10ac}{5a(b + 2c)}$$

$$\textcircled{17} \quad \frac{3ab - 6bc}{3b(a - 2c)}$$

$$\textcircled{18} \quad \frac{1rs + 11st}{1s(r + 3t)}$$

$$\textcircled{19} \quad \frac{15er - 20de}{5e(3r - 4d)}$$

$$\textcircled{20} \quad \frac{7pq - 14pr}{7p(q - 2r)}$$

$$\textcircled{21} \quad \frac{8ct - 12cu}{4c(2t - 3u)}$$

$$\textcircled{22} \quad \frac{12gh + 15hk}{3h(4g + 5k)}$$

$$\textcircled{23} \quad \frac{20pq - 8pr}{4p(5q - 2r)}$$

$$\textcircled{24} \quad \frac{cd - ce}{c(d - e)}$$

$$\textcircled{25} \quad \frac{4ab + bc}{b(4a + c)}$$

$$\textcircled{26} \quad \frac{5xz + 30yz}{5z(x + 6y)}$$

$$\textcircled{27} \quad \frac{18cd - 12de}{6d(3c - 2e)}$$

$$\textcircled{28} \quad \frac{6ep + 2fq}{2f(3e + q)}$$

$$\textcircled{29} \quad \frac{jk - 3kr}{k(j - 3r)}$$

$$\textcircled{30} \quad \frac{3xy - 18xz}{3x(y - 6z)}$$