2. Bez ggT ausklammern Lösungen AB 1

1. $8a + 8b = 8(a + b)$
2. $6x – 10y = 2(3x – 5y)$
3. $4ax – 12bx = 4x(a – 3b)$
4. $9x^2 + 6xy = 3x(3x + 2y)$
5. $9x^2 – 3xy = 3x(3x – y)$
6. $9x^2 + 3x = 3x(3x + 1)$
7. $12x – 36y + 84z = 12(x – 3y + 7z)$
8. $m – mx + my = m(1 – x + y)$
9. $69x + 92y + 23z = 23(3x + 4y + z)$
10. $32b + 48c – 96d = 16(2b + 3c – 6d)$
11. $ax – ay + 4a = a(x – y + 4)$
12. $10a – 15b + 20c = 5(2a – 3b + 4c)$
13. $ax^3 + bx^2 + cx = x(ax^2 + bx + c)$
14. $6xy – 3y^2 + 5y^3 = y(6x – 3y + 5y^2)$
15. $6bc + 2c^2 = 2c(3b + c)$
16. $3xy – 3x = 3x(y – 1)$
17. $p^3 – 3p^2 = p^2(p – 3)$
18. $5e^4 – 5ef = 5e(e^3 – f)$
19. $4x^2 + 2xy = 2x(2x + y)$
20. $2a^2 + 2ab – 2ac = 2a(a + b – c)$
21. $x^3y + x^2y – xy = xy(x^2 + x – 1)$
22. $21f^2 + 42fg – 35fh = 7f(3f + 6g – 5h)$
23. $42p^2q^2 – 54pq^3 – 72q^4 = 6q^2(7p^2 – 9pq – 12q^2)$
24. $12a^3b – 15a^2b + 22ab^3 = ab(12a^2 – 15a + 22b^2)$
25. $3a + 3b = 3\ (a + b)$
26. $6x – 6y = 6\ (x – y)$
27. $6c + 2 = 2\ (3c + 1)$
28. $3a – 9b = 3\ (a – 3b)$

29. $10a - 5 = 5\,(2a - 1)$
30. $7c - 14d = 7\,(c - 2d)$
31. $12x + 4y = 4\,(3x + y)$
32. $4y - 10z = 2\,(2y - 5z)$
33. $ab + ac = a\,(b + c)$
34. $3x^2 + 9x + 9 = 3(x^2 + 3x + 3)$
35. $2a^2 - 4ab + 6b^2 = 2\,(a^2 - 2ab + 3b^2)$
36. $6x^2 - 6x + 6 = 6(x^2 - x + 1)$
37. $12r^2 - 20rs + 16s^2 = 4(3r^2 - 5rs + 4s^2)$

Klammere (-1) aus.

38. $-a - b = -1(a + b)$
39. $-c - 1 = -1(c + 1)$
40. $-c + d - e = -1(c - d + e)$
41. $-2a + 3b - 1 = -1(2a - 3b + 1)$
42. $-x + y + z = -1(x - y - z)$
43. $-4b - c + d + 1 = -1(4b + c - d - 1)$
44. $-5p + q - 9r + s = -1(5p - q + 9r - s)$

Klammere auch das (-) mit aus.

45. $-b^2 - 2bc = -b(b + 2c)$
46. $-4z^2 - 4z = -4z(z + 1)$
47. $-18a^2 - 27ab - 9a = -9a(2a + 3b + 1)$
48. $-18p^2 - 27pq - 9p^2 = -9p(2p + 3q + p)$
49. $-15p^3 - 21p^2q - 27pq^2 = -3p(5p^2 + 7pq + 9q^2)$
50. $-12x + 6 - 18y = -6(2x - 1 + 3y)$