

3.11 Lösungen

Potenzieren von Summen

1. $\underline{y^2 + 2y + 1}$

2. $\underline{16 - 8v + v^2}$

3. $\underline{4x^2 + 12xy + 9y^2}$

4. $\underline{t^2 - 1}$

5. $\underline{81 - 9a^2}$

6. $\underline{z^4 - 4z^2 + 4}$

7. $\underline{36m^2 - 72mn + 36n^2}$

8. $\underline{x^2 - 4}$

9. $\underline{a^2 + b^2 + c^2 + 2ab - 2ac - 2bc}$

10. $\underline{4u^4 - 12u^2v^2 + 9v^4}$

11. $\underline{a^4 - b^4}$

12. $\underline{16(1+m)}$

Zerlegen in Faktoren

13. $\underline{6a(x+y)}$

14. $\underline{(x+y)(a-6b)}$

15. $\underline{(x+y)(1+a)}$

16. $\underline{(3a-1)(x-2)}$

17. $\underline{2y(8m-12n+9)}$

18. $\underline{(a+2)(3a+2b)}$

19. $\underline{(b-c)(a+5)}$

20. $\underline{(4b-1)(5a+1)}$

21. $\underline{(15m+2a)(3n-2m)}$

22. $\underline{(4a+1)(x+y)}$

23. $\underline{(x-1)(x+1)}$

24. $\underline{9x(x-2)(x+2)}$

25. $\underline{(4a+3b)^2}$

26. $\underline{2(x-1)^2}$

27. $\underline{(a-6)(a+5)}$

28. $\underline{(a-b)(2x+y+z)}$

29. $\underline{5ab^2(3a+5b)}$

30. $\underline{9a^2y^2(5-7y+4a)}$

31. $\underline{2x(2x+3y)(x-4y)}$

Kürzen

32.
$$\frac{x(x+1)}{2}$$

33.
$$\frac{5m+7n}{3}$$

34.
$$\frac{a-b+4}{a+b}$$

Zerlegen in Faktoren

35.
$$25a(b+5c-3x)$$

36.
$$7(ax-2a-3)$$

37.
$$(a+x)(b+x)$$

38.
$$(b+1)(4n+3m)$$

39.
$$(z+1)(b-c)$$

40.
$$(2a+b-c)(x-y)$$

41.
$$(4a-1)(c+3d)$$

42.
$$(a-c)x(5y+7b)$$

43.
$$b^2(b-4)(b+4)$$

44.
$$b(3b-1)(3b+1)$$

45.
$$(x-2)(x+2)(x^2+4)$$

46.
$$(b-2)^2$$

47.
$$\frac{a+x}{a-x}$$

48.
$$\frac{9a+7b}{7}$$

49.
$$\frac{(x-3y)(x+3y)}{36} \quad \text{oder} \quad \left(\frac{x}{6}-\frac{y}{2}\right)\left(\frac{x}{6}+\frac{y}{2}\right)$$

50.
$$a^2+1$$

51.
$$\frac{a+b}{a-b}$$

52.
$$\frac{x-5}{2(x-3)}$$