

NAME:

1. $9a + (-3b) - (+2a) - (-5b) =$

2. $(-19m - 5n + 1) - (-4m - 2n - 3) =$

3. $12m - 4n - (6m - 4n) - [(3m + 4n) - (2m + 9n)] =$

4. $3c \cdot 6a \cdot 4mn \cdot 5a =$

5. $(ab)^2 c^3 \cdot a^2 (bc)^3 =$

6. $(-2)^4 =$

7. $(5xy^2z^3)^3 =$

8. $-15(-12ac)(-25a)ac(-a) =$

9. $(-7a^3)(-2ab)^4(-a^2b) =$

10. $4s(3t - s) =$

11. $(3m^2n + 7mn^3)2m^2n^2 =$

12. $(3a - 2)(2a + 3) =$

13. $(t + 2)(t + 5) =$

14. $(2x + 3y)^2 =$

15. $(5a^2 - bc)^2 =$

16. $(2a - 3) \cdot (2a + 3) =$

17. $(4s + 3t)(4s - 3t) + (3s - 4t)(3s + 4t) =$

18. $(3x - 7y)^2 - (2x + y)^2 =$

19. $(x - 3)(x + 3)(x^2 + 9) =$

20. Bonusaufgabe: $[(5x + 2z)(5x - 2z)]^2 =$

NAME: LOSUNGEN

$$| 1. 9a + (-3b) - (+2a) - (-5b) = \underline{3a - 3b - 2a + 5b} = \underline{7a + 2b}$$

$$| 2. (-19m - 5n + 1) - (-4m - 2n - 3) = \underline{-19m - 5n + 1 + 4m + 2n + 3} = \underline{-15m - 3n + 4}$$

$$| 3. 12m - 4n - (6m - 4n) - [(3m + 4n) - (2m + 9n)] = \underline{12m - 4n - 6m + 4n - 3m - 4n + 2m + 9n} = \underline{5m + 5n}$$

$$| 4. 3c \cdot 6a \cdot 4mn \cdot 5a = \underline{360 a^2 c m n}$$

$$| 5. (ab)^2 c^3 \cdot a^2 (bc)^3 = \underline{a^2 b^2 c^3 \cdot a^2 b^3 c^3} = \underline{a^4 b^5 c^6}$$

$$| 6. (-2)^4 = \underline{16}$$

$$| 7. (5xy^2z^3)^3 = \underline{125 x^3 y^6 z^9}$$

$$| 8. -15(-12ac)(-25a)ac(-a) = \underline{4500 a^4 c^2}$$

$$| 9. (-7a^3)(-2ab)^4(-a^2b) = \underline{(-7a^3) \cdot 16a^4b^4 \cdot (-a^2b)} = \underline{112 a^9 b^5}$$

$$| 10. 4s(3t - s) = \underline{12st - 4s^2}$$

$$| 11. (3m^2n + 7mn^3)2m^2n^2 = \underline{6m^4n^3 + 14m^3n^5}$$

$$| 12. (3a - 2)(2a + 3) = \underline{6a^2 + 9a - 4a - 6} = \underline{6a^2 + 5a - 6}$$

$$| 13. (t + 2)(t + 5) = \underline{t^2 + 7t + 10}$$

$$| 14. (2x + 3y)^2 = \underline{4x^2 + 12xy + 9y^2}$$

$$| 15. (5a^2 - bc)^2 = \underline{25a^4 - 10a^2bc + b^2c^2}$$

$$| 16. (2a - 3) \cdot (2a + 3) = \underline{4a^2 - 9}$$

$$| 17. (4s + 3t)(4s - 3t) + (3s - 4t)(3s + 4t) = \underline{16s^2 - 9t^2 + 9s^2 - 16t^2} = \underline{25s^2 - 25t^2}$$

$$| 18. (3x - 7y)^2 - (2x + y)^2 = \underline{9x^2 - 42xy + 49y^2 - 4x^2 - 4xy - y^2} = \underline{5x^2 - 46xy + 48y^2}$$

$$| 19. (x - 3)(x + 3)(x^2 + 9) = \underline{(x^2 - 9)(x^2 + 9)} = \underline{x^4 - 81}$$

$$| 20. \text{ Bonusaufgabe: } [(5x + 2z)(5x - 2z)]^2 = \underline{(25x^2 - 4z^2)^2} = \underline{625x^4 - 200x^2z^2 + 16z^4}$$

$$\underline{24} - 1 \cdot \frac{1}{2} = 22 \frac{1}{2}$$