Terme

1. $b^3 c^{-1} d^{-6} \cdot a^{-2} b^{-2} c^{-1} d^{-5} \cdot 2a^4 bc^3 d^2 \cdot ab^2 d^3 =$ ☐

2. $a^2 bc^3 d^3 \cdot 2ab^3 cd^2 \cdot a^4 bc^{-4} d^3 \cdot 2a^2 b^3 c^3 d^2 =$ ☐

3. $\dfrac{a^{-1} b^{-2} d^{-2} \cdot 2b^2 cd}{c^{-2}} =$ ☐

4. $\dfrac{a^3 b^{-3} c^5 d^7 \cdot b^{-1} c^2 d^{-3}}{b^{-3} c^4 d^4} =$ ☐

5. $\dfrac{8 \cdot 10^{14}}{10^6} =$ ☐ $\quad \dfrac{5{,}4 \cdot 10^{20}}{6 \cdot 10^7} =$ ☐ $\quad \dfrac{3{,}6 \cdot 10^{-2}}{4 \cdot 10^5} =$ ☐

Faktorisiere und fasse zusammen

6. $\sqrt{112} + \sqrt{175} - \sqrt{63} =$ ☐ $\quad \sqrt{45} + \sqrt{80} - \sqrt{180} =$ ☐

7. $\sqrt{175} + \sqrt{28} - \sqrt{343} =$ ☐ $\quad \sqrt{28} + \sqrt{63} - \sqrt{112} =$ ☐

8. $\sqrt{112} =$ ☐ $\quad \sqrt{63} =$ ☐ $\quad \sqrt{150} =$ ☐

9. $\sqrt{18} =$ ☐ $\quad \sqrt{32} =$ ☐ $\quad \sqrt{150} =$ ☐

10. $(-3a^2 b - b)(b - 3ab) =$ _____

11. $(-3ab + 3b)(4ab + a) =$ _____

Faktorisiere

12. $a^6 + 3a^3 - 2a^6 + 4a^5 =$ _____

13. $3a^3 b^7 - 2a^4 b^3 + 3a^2 b^3 - 6a^4 b^4 =$ _____

14. $a^5 b^2 - 3a^3 b^5 + a^7 b^2 + 2a^5 b^3 =$ _____

Fasse zusammen

15. $2a^2 b - a^4 b^3 - 3a^5 b^2 - b^2 - 2a^2 b^4 - 2a^2 b + 2a^4 b^3 - 3a^5 b^2 =$ _____

16. $-4a^2 b^4 + 6a - 3a^5 b + a^3 b^3 - 4a^3 - 3a^2 b^4 + 2a - 2a^5 b =$ _____

17. $ab^4(-2a^2 b^2 - 2 + 2a^3 b + 5a^3 b) =$ _____

18. $a^2 b(-a^2 b^3 - 6a^2 + 4b^2 + 4a^4 b^3) =$ _____

Terme

1. $b^3c^{-1}d^{-6} \cdot a^{-2}b^{-2}c^{-1}d^{-5} \cdot 2a^4bc^3d^2 \cdot ab^2d^3 = \boxed{2a^3b^4cd^{-6}}$

2. $a^2bc^3d^3 \cdot 2ab^3cd^2 \cdot a^4bc^{-4}d^3 \cdot 2a^2b^3c^3d^2 = \boxed{4a^9b^8c^3d^{10}}$

3. $\dfrac{a^{-1}b^{-2}d^{-2} \cdot 2b^2cd}{c^{-2}} = \boxed{2a^{-1}c^3d}$

4. $\dfrac{a^3b^{-3}c^5d^7 \cdot b^{-1}c^2d^{-3}}{b^{-3}c^4d^4} = \boxed{a^3b^{-1}c}$

5. $\dfrac{8 \cdot 10^{14}}{10^6} = \boxed{8 \cdot 10^8}$ $\quad \dfrac{5{,}4 \cdot 10^{20}}{6 \cdot 10^7} = \boxed{9 \cdot 10^{12}}$ $\quad \dfrac{3{,}6 \cdot 10^{-2}}{4 \cdot 10^5} = \boxed{9 \cdot 10^{-8}}$

Faktorisiere und fasse zusammen

6. $\sqrt{112} + \sqrt{175} - \sqrt{63} = \boxed{6\sqrt{7}}$ $\quad \sqrt{45} + \sqrt{80} - \sqrt{180} = \boxed{\sqrt{5}}$

7. $\sqrt{175} + \sqrt{28} - \sqrt{343} = \boxed{0}$ $\quad \sqrt{28} + \sqrt{63} - \sqrt{112} = \boxed{\sqrt{7}}$

8. $\sqrt{112} = \boxed{4 \cdot \sqrt{7}}$ $\quad \sqrt{63} = \boxed{3 \cdot \sqrt{7}}$ $\quad \sqrt{150} = \boxed{5 \cdot \sqrt{6}}$

9. $\sqrt{18} = \boxed{3 \cdot \sqrt{2}}$ $\quad \sqrt{32} = \boxed{4 \cdot \sqrt{2}}$ $\quad \sqrt{150} = \boxed{5 \cdot \sqrt{6}}$

10. $(-3a^2b - b)(b - 3ab) = \underline{-3a^2b^2 - b^2 + 9a^3b^2 + 3ab^2}$

11. $(-3ab + 3b)(4ab + a) = \underline{-12a^2b^2 + 12ab^2 - 3a^2b + 3ab}$

Faktorisiere

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

13. $3a^3b^7 - 2a^4b^3 + 3a^2b^3 - 6a^4b^4 = \underline{a^2b^3(3ab^4 - 2a^2 + 3 - 6a^2b)}$

14. $a^5b^2 - 3a^3b^5 + a^7b^2 + 2a^5b^3 = \underline{a^3b^2(a^2 - 3b^3 + a^4 + 2a^2b)}$

Fasse zusammen

15. $2a^2b - a^4b^3 - 3a^5b^2 - b^2 - 2a^2b^4 - 2a^2b + 2a^4b^3 - 3a^5b^2 = \underline{a^4b^3 - 6a^5b^2 - b^2 - 2a^2b^4}$

16. $-4a^2b^4 + 6a - 3a^5b + a^3b^3 - 4a^3 - 3a^2b^4 + 2a - 2a^5b = \underline{-7a^2b^4 + 8a - 5a^5b + a^3b^3 - 4a^3}$

17. $ab^4(-2a^2b^2 - 2 + 2a^3b + 5a^3b) = \underline{-2ab^4 - 2a^3b^6 + 2a^4b^5 + 5a^4b^5}$

18. $a^2b(-a^2b^3 - 6a^2 + 4b^2 + 4a^4b^3) = \underline{-6a^4b - a^4b^4 + 4a^2b^3 + 4a^6b^4}$