

Terme

$$1. \quad a^2 bcd \cdot 2b \cdot a^3 b^2 c^{-2} d^{-3} \cdot a^{-4} b^3 c^3 d^{-1} = \boxed{}$$

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

$$3. \quad \frac{4ab^3 c^4 d^2 \cdot 2a^{-2} b^{-1} d^{-1}}{2a^2 b^2 d^{-2}} = \boxed{}$$

$$4. \quad \frac{a^{-2} b^4 c^4 d^4 \cdot a^4 cd}{a^{-3} bd^3} = \boxed{}$$

$$5. \quad \frac{5,4 \cdot 10^{17}}{9 \cdot 10^9} = \boxed{} \quad \frac{2 \cdot 10^{-22}}{2 \cdot 10^{-8}} = \boxed{} \quad \frac{3 \cdot 10^{20}}{10^9} = \boxed{}$$

Faktorisiere und fasse zusammen

$$6. \quad \sqrt{175} + \sqrt{63} - \sqrt{112} = \boxed{} \quad \sqrt{45} + \sqrt{20} - \sqrt{245} = \boxed{}$$

$$7. \quad \sqrt{12} + \sqrt{75} - \sqrt{27} = \boxed{} \quad \sqrt{48} + \sqrt{27} - \sqrt{147} = \boxed{}$$

$$8. \quad \sqrt{45} = \boxed{} \quad \sqrt{96} = \boxed{} \quad \sqrt{125} = \boxed{}$$

$$9. \quad \sqrt{48} = \boxed{} \quad \sqrt{48} = \boxed{} \quad \sqrt{32} = \boxed{}$$

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

$$11. \quad (-4b + 3ab)(-a + ab) = \underline{\hspace{10em}}$$

Faktorisiere

$$12. \quad a^5 + 2a^6 + 4a^4 + 3a^5 = \underline{\hspace{10em}}$$

$$13. \quad 6a^2 b^3 - 6a^4 b - a^6 b^2 + 2a^6 b = \underline{\hspace{10em}}$$

$$14. \quad 3a^2 b^3 + 2a^3 b^5 - 2ab^4 + 3a^6 b^4 = \underline{\hspace{10em}}$$

Fasse zusammen

$$15. \quad -a^2 b^3 + 3b + a^3 b^4 - 4ab^4 + 2a^2 b^5 - 3a^2 b^3 - b + a^3 b^4 = \underline{\hspace{10em}}$$

$$16. \quad 4a + 2a^2 b^4 + 4ab^3 - 6a^3 b^2 + a^2 b^4 + a - 5a^2 b^4 - 6ab^3 = \underline{\hspace{10em}}$$

$$17. \quad 2a^2 b^4 (ab - 3b - a^4 - ab) = \underline{\hspace{10em}}$$

$$18. \quad b^3 (b^3 + 4a^3 b^2 + 3a^4 b^3 - 4a^3) = \underline{\hspace{10em}}$$

Terme

$$1. \quad a^2 bcd \cdot 2b \cdot a^3 b^2 c^{-2} d^{-3} \cdot a^{-4} b^3 c^3 d^{-1} = \boxed{2ab^7 c^2 d^{-3}}$$

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

$$3. \quad \frac{4ab^3 c^4 d^2 \cdot 2a^{-2} b^{-1} d^{-1}}{2a^2 b^2 d^{-2}} = \boxed{4a^{-3} c^4 d}$$

$$4. \quad \frac{a^{-2} b^4 c^4 d^4 \cdot a^4 cd}{a^{-3} bd^3} = \boxed{a^5 b^3 c^5}$$

$$5. \quad \frac{5,4 \cdot 10^{17}}{9 \cdot 10^9} = \boxed{6 \cdot 10^7} \quad \frac{2 \cdot 10^{-22}}{2 \cdot 10^{-8}} = \boxed{10^{-14}} \quad \frac{3 \cdot 10^{20}}{10^9} = \boxed{3 \cdot 10^{11}}$$

Faktorisiere und fasse zusammen

$$6. \quad \sqrt{175} + \sqrt{63} - \sqrt{112} = \boxed{4\sqrt{7}} \quad \sqrt{45} + \sqrt{20} - \sqrt{245} = \boxed{-2\sqrt{5}}$$

$$7. \quad \sqrt{12} + \sqrt{75} - \sqrt{27} = \boxed{4\sqrt{3}} \quad \sqrt{48} + \sqrt{27} - \sqrt{147} = \boxed{0}$$

$$8. \quad \sqrt{45} = \boxed{3 \cdot \sqrt{5}} \quad \sqrt{96} = \boxed{4 \cdot \sqrt{6}} \quad \sqrt{125} = \boxed{5 \cdot \sqrt{5}}$$

$$9. \quad \sqrt{48} = \boxed{4 \cdot \sqrt{3}} \quad \sqrt{48} = \boxed{4 \cdot \sqrt{3}} \quad \sqrt{32} = \boxed{4 \cdot \sqrt{2}}$$

$$10. \quad (2a - b^2)(-3a^2 + ab) = \underline{-6a^3 + 3a^2 b^2 + 2a^2 b - ab^3}$$

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

Faktorisiere

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

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

$$14. \quad 3a^2 b^3 + 2a^3 b^5 - 2ab^4 + 3a^6 b^4 = \underline{ab^3(3a + 2a^2 b^2 - 2b + 3a^5 b)}$$

Fasse zusammen

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

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

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

$$18. \quad b^3(b^3 + 4a^3 b^2 + 3a^4 b^3 - 4a^3) = \underline{b^6 + 4a^3 b^5 + 3a^4 b^6 - 4a^3 b^3}$$