PRODOTTI NOTEVOLI

1. $$\frac{(a^{2x-y})^{2x+y} : (a^{2x-y})^{x+y}}{(a^{x-y})^{x-y}} =$$

2. $(1 + 2a^n)^2 - (3a^n - 1)^2 - (-2a^n)^2 + 1 =$

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

4. $[(x - 3xy)(x + 3xy)(x^2 - 1)(x^2 + 1) - 9x^2 y^2] : (-x^2) =$

5. $[(3a^2 + 5ab)(3a^2 - 5ab) - 8a^3 b] : (-3a^2) =$

6. $[(a^n - 1)(a^n + 1)]^2 - (a^{2n} + 2)^2 + 3(2a^{2n} + 1) =$

7. $(3 - x^n)(1 - x^n) - (2 - x^n)^2 + (1 + x^n)(1 - x^n) =$

8. $$\left\{ \left[\frac{(a^{n-2})^{2n-3} : (a^{-n})^{-n+3} : (a^n)^n}{a^{1-4n}} - \frac{2}{3} a^5 - 0{,}5\, a^{n-1} \right]^2 - \frac{1}{9} (a^5)^2 \right\} : (-2^2 a^n) =$$

9. $$\left[\frac{(a^n)^{2n-1} : (a^{n-1})^{n+1} \cdot (a^{n+1})^{n+1}}{(a^{n+2})^{n-1}} + a^{n^2-4} \right]^2 - \frac{1}{2^{-1}} a^{2n^2} - a^{2n^2} \cdot \frac{a^{16} + 1}{a^8} =$$

10. $$\left[\frac{1}{3} a^{2n-3} - \frac{a^{2n-1}}{a^{n-2}} - 2(a^{n-1})^3 : (a^2)^{n-2} \right]^3 =$$

11. $$\left\{ \left[\frac{(a^{n-2})^{n^2-1} : (a^n)^{n^2-1} \cdot (a^{2n})^n}{a^{2-n}} - 2 \right]^4 - 16 - a^{3n} (a^n - 8) \right\} : (8a^n) =$$

12. $$\left\{ a^n + a^{7n} + \left[0{,}5a^{2n-1} : (-2a^{n-2}) - \frac{3}{4} a^{n+1} \right]^7 : (-0{,}\bar{1}\, a^7) : 9 \right\}^4 =$$

13. $\{[(2^{80} - 2^{79})^2 + 2^{157}] : 2^{150} - 2^7 \} : 2^8 =$

14. $(2^6 + 2^5 + 2^4)^2 - (2^6 - 2^5)(2^5 + 2^6) - 2^8 =$

15. $$\frac{(3^{10} + 3^{11})^2}{(3^6 - 3^5)^3} =$$

16. $$\frac{(2^6 + 2^7)^2}{(2^5 + 2^6 - 2^4)^2} =$$

17. $(a + b)^3 + (2a + b)^3 =$

18. $(3a + 2b)[a(2a + b) + (a + b)^2] =$

19. $$\left(\frac{3}{2} x^2 - 1 \right)^3 - 3\left(\frac{3}{2} x^2 - 1 \right)^2 + \left(\frac{3}{2} x^2 - 1 \right)^2 \left(7 - \frac{3}{2} x^2 + 1 \right) =$$