

Simulazione di verifica

Periodo 1 - UdA 5-6

Svolgere le seguenti espressioni

1. $2^1 + (1^3 + 1 + 4^0) - (3 \cdot 11 - 2^5)$

2. $(2^4 - 3^2) \cdot (1 + 2^4 - 3 \cdot 5)^2 - 3^3$

3. $5^2 + (2^4 - 2 \cdot 7)^2 - (12 - 3^2)^3$

4. $(7^2 - 3 \cdot 2^4)^3 + (6^2 - 5^2 + 1^2) : (2 \cdot 3^2 - 3 \cdot 5 - 1)^2$

5. $(3 \cdot 2^3 - 2 \cdot 3^2 - 4^0)^2 - (1 + 4^2 - 7 \cdot 2) \cdot (5^2 - 2^3 \cdot 3 + 1)^3$

6. $(13 - 2^3 + 1)^2 - (2^4 - 3^2) \cdot (2^3 - 3)$

Svolgere le seguenti espressioni usando, dove possibile, le proprietá delle potenze

7. $16^3 : 2^3 : 8 : 4^2$

8. $(12^2)^3 : 4^6 \cdot 3^4 : (3^3)^3$

9. $(2^3 - 6)^3 - (19 - 3 \cdot 2^2)^3 : (3^3 - 2^2 \cdot 5)^2$

10. $(2^3 - 1^3)^2 - (4 - 1)^4 : (2 + 1)^3 \cdot (2^2)^2$

11. $(3^2 - 2^2 - 2^1)^5 : (12^3 : 4^3 : 3)^2$

12. $3^2 - (3^3 + 1^3 - 2^3) : (12^4 : 6^4 : 2^2)$

Svolgere le seguenti espressioni con frazioni

$$13. \quad \left(\frac{2}{15} \cdot \frac{5}{6}\right) \cdot \left(1 + \frac{1}{2}\right)^2 + \left(\frac{5}{2}\right)^2 \cdot \frac{3}{5}$$

$$14. \quad \left(\frac{4}{5} \cdot \frac{1}{6} \cdot 3^2\right)^2 - \left(2 - 3^2 \cdot \frac{1}{5}\right)^2 - \left(\frac{2}{3}\right)^2 \cdot \frac{9}{10}$$

$$15. \quad 2 - \left(\frac{3}{2}\right)^2 \cdot \left(1 - \frac{2}{3}\right) - \left(\frac{3}{4}\right)^2 \cdot \left(1 - \frac{1}{9}\right)$$

$$16. \quad \left(1 - \frac{2}{5}\right)^2 \cdot 25 \cdot \left(\frac{1}{2}\right)^3 \cdot \left(3 - \frac{1}{3}\right) - \left(\frac{2}{3}\right)^3 \cdot 9$$

$$17. \quad 2 \cdot \left(1 - \frac{1}{2} + \frac{1}{4}\right)^2 \cdot \frac{8}{9} - \left(1 - \frac{2}{3}\right)^2 - 3 \cdot \left(\frac{2}{3}\right)^3$$

$$18. \quad \left(2^2 \cdot \frac{3}{16}\right)^2 - \left(\frac{1}{2}\right)^4$$

Svolgere le seguenti espressioni con numeri negativi

$$19. \quad -(-3)^2 - (-2)^3$$

$$20. \quad 3 \cdot (-2)^2 + (7 - 4 \cdot 3 + 3)^3$$

$$21. \quad (-3^2 + 2 \cdot 4)^4 + (-4^2 + 3 \cdot 5)^5$$

$$22. \quad (7 - 2^3 - 1)^3 \cdot (1^3 - 2)^2 - 5 \cdot (-3^2 - 1 + 2 \cdot 4)$$

$$23. \quad (5^2 - 3^3)^3 + (1 - 2^2)^2 - (3^2 - 2 \cdot 5)^6$$

$$24. \quad - (4^2 - 3 \cdot 5 + 1)^3 \cdot (-5^2 + 3^3 - 2^2 + 1^1)^4 \cdot 3 + (-5)^2$$

SOLUZIONI

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$$\begin{array}{ccccc}[1] & 4 & [2] & 1 & [3] \\ [4] & 4 & [5] & 1 & [6]\end{array}$$

$$\begin{array}{ccccc}[7] & 4 & [8] & 3 & [9] \\ [10] & 1 & [11] & 3 & [12]\end{array}$$

$$\begin{array}{ccccc}[13] & 4 & [14] & 1 & [15] \\ [16] & 1/3 & [17] & 0 & [18]\end{array}$$

$$\begin{array}{ccccc}[19] & -1 & [20] & 4 & [21] \\ [22] & 2 & [23] & 0 & [24]\end{array}$$