

ESPRESSIONI NUMERICHE e PROPRIETÀ DELLE POTENZE

1. $\left(-1 - \frac{1}{2}\right)^3 \left\{ -\frac{1}{3^2} + \left[\left(-\frac{1}{6}\right) : \left(-\frac{7}{6}\right) + \frac{6}{7} : \left(\frac{1}{2} - 1\right) - \frac{3}{7} \right] \cdot 2^{-1} \right\} =$
2. $-2^{-2} \left\{ \left[\left(1,2 - \frac{3}{4}\right) \left(0,8 + \frac{1}{5}\right) - \frac{1}{3} : \left(\frac{7}{6} - \frac{3}{4}\right) \right] : \left(\frac{3}{5} + \frac{1}{3}\right) + (-2)^{-3} \right\} - \left(-\frac{4}{3}\right)^{-2} =$
3. $\left\{ \left[\left(-\frac{1}{3}\right)^{-3} \right]^4 \left[\left(-\frac{1}{3}\right)^{-4} \right]^{-2} + (-3)^2 \right\} : [-5 \cdot (-3)^2] + [(-2)^3]^{-1} + \frac{1}{8} =$
4. $\left[\frac{3}{5} + \left(-\frac{2}{3}\right) \left(1 - \frac{4}{10}\right) \right] : \left[\frac{1}{5} - \frac{1}{10} \left(-\frac{2}{3}\right) : \left(-\frac{1}{3}\right)^2 \right] =$
5. $\left(\frac{1}{6} - \frac{2}{3} + \frac{1}{4}\right) : \left[\frac{1}{3} - \frac{5}{6} - \left(-\frac{1}{2}\right)^2\right] - \left(1 - \frac{1}{3}\right)^2 : \left(1 + \frac{1}{3}\right)^2 =$
6. $\left[\frac{2}{5} : \frac{1}{2} \cdot \left(-\frac{5}{2}\right)^2 + 1\right] \cdot \left(-\frac{1}{2} - \frac{2}{3}\right) \cdot \left(-2 - \frac{1}{3}\right)^{-2} =$
7. $\left[\left(-\frac{3}{4}\right)^2\right]^3 \cdot \left(\frac{1}{4} - 1\right)^5 : \left[\left(-\frac{3}{4}\right)^5\right]^2 + \{2^5 : (2^{-3} \cdot 2^6)\}^{-2} \cdot \left[\left(-\frac{1}{3}\right)^{-2}\right]^2 =$
8. $\frac{7 - \left(-\frac{1}{14}\right) \left(2 - \frac{3}{5}\right) - \frac{28}{3}}{-\frac{2}{5} - 2 + (-2) \left(-\frac{1}{6}\right)} - (-2)^3 \cdot \left(1 - \frac{34}{31}\right) =$
9. $\frac{1}{5} : \left[\frac{1}{2} \cdot \left(-\frac{2}{5}\right)^2\right] - \left[-\frac{1}{2} + \left(-2 - \frac{1}{2}\right)^{-1}\right] =$
10. $\left[\frac{-\frac{1}{2} - \frac{3}{4}}{-3 + \frac{3}{4}} + \frac{-\frac{1}{2} - \frac{3}{5}}{-3 + \left(-\frac{1}{2}\right)^2} \right] \left(-1 - \frac{1}{2}\right)^2 =$
11. $\frac{\left(-\frac{4}{3}\right)^{-2} \left(3 + \frac{1}{2^{-2}}\right)}{-\left(-\frac{1}{2}\right)^2 + 5 - \frac{2}{3}} + \frac{1}{2} \cdot \left(-2 - \frac{1}{3}\right)^{-1} =$

$$12. \frac{-\frac{4}{3} + \frac{1}{3} : \left(-\frac{1}{2}\right)^3}{-2 + \frac{1}{3}} - \frac{-\frac{3}{2} + (+2)^{-3} \left(1 + \frac{1}{3}\right)}{\left(-\frac{7}{12}\right)^2 \cdot \left(-\frac{5}{7}\right)} + \frac{108}{35} =$$

$$13. \frac{-\left(2 - \frac{1}{2}\right)^{-3} - \left[\frac{2}{3} \left(1 - \frac{1}{4}\right) \left(1 + \frac{1}{5}\right)\right]^{-1}}{\left\{-2^3 \left[1 - \left(-\frac{1}{2}\right)^2 - \left(1 + \frac{1}{2}\right)^2\right] - 9\right\}^{-3}} =$$

$$14. -2^2 - \frac{\left(1 + \frac{2}{3}\right) [3 + (-2)^{-2}] : \left(3 - \frac{2}{5}\right)}{\left[\left(-\frac{5}{2}\right)^2\right]^{-3} : \left[\left(-\frac{2}{5}\right)^2 \left(-\frac{2}{5}\right)^3\right]} =$$

$$15. \frac{(-3)^4 : (-3)^3 + 2^{-1} : 2}{(-3)^9 : (-3)^8 + 2^{-1}} + \frac{-3^3 : (-3)^2 + 3 : 3^{-1} + 1}{[-(-2)^{-2} : (-2)^3]^{-1}} - \left(\frac{32}{7}\right)^{-1} =$$

$$16. \frac{-4 \left(-\frac{2}{3}\right)^{-2} \cdot \left[\left(\frac{1}{5} - \frac{1}{6}\right) : \left(\frac{7}{30} - \frac{5}{12}\right) - \left(\frac{5}{3} - \frac{3}{2}\right) : \left(-\frac{3}{2}\right)\right]}{\left(\frac{3}{5} - \frac{1}{3}\right) \left(\frac{1}{4} - 1\right) - \left[-2^2 \left(3 - \frac{1}{2}\right) + 2 \left(3 + \frac{1}{2}\right)\right]} =$$

$$17. \left(1 + \frac{1}{-\frac{3}{4} - 1}\right) \cdot \frac{-\frac{3}{4} - 1}{2 \left(-\frac{3}{4}\right)} =$$

$$18. [1 + (-1)^{-1}] : \left(1 - \frac{-1+1}{-1}\right) =$$

$$19. \left(1 - \frac{3}{11}\right) : \left(1 - \frac{-\frac{11}{3} + 1}{-\frac{11}{3}}\right) =$$

$$20. \frac{2 - \frac{1}{-\frac{2}{3} + 1}}{2 + \frac{5}{-\frac{2}{3} - 2}} - \left[\frac{\left(-\frac{2}{3}\right)^2 + 1}{\left(-\frac{2}{3} + 1\right)^2} - \frac{2}{-\frac{2}{3} + 1}\right] =$$