

ESERCIZI IN PIÙ

ESPRESSIONI CON I RAZIONALI

Calcola il valore delle seguenti espressioni.

$$1 \quad \frac{\left[\left(2 - \frac{1}{2} \right) + \left(-2 + \frac{1}{3} \right) + \left(4 - \frac{1}{6} \right) - 1 \right] : 2^3 - \frac{4}{3}}{\left\{ \left[(-2)^2 + (-3)^3 - \left(\frac{12}{5} \right)^0 \right] \cdot \left(-\frac{1}{5} \right)^2 - \frac{1}{25} \right\} \cdot \frac{3}{4}} \quad \left[\frac{4}{3} \right]$$

$$2 \quad \frac{\left[\left(\frac{23}{30} - \frac{13}{18} \right) \cdot \left(\frac{23}{15} - \frac{1}{30} \right) \right] : \frac{3}{2} - 1}{\left[\frac{13}{12} - \left(\frac{7}{9} - \frac{1}{3} \right) + \frac{2}{9} \right] - \left(-\frac{7}{18} + \frac{1}{12} + \frac{5}{6} \right) - \frac{1}{3} + 1} \quad \left[-\frac{43}{45} \right]$$

$$3 \quad 4 + \frac{\left(\frac{3}{4} + \frac{1}{3} : \frac{2}{5} \right) : \left(\frac{3}{5} + \frac{5}{3} - 1 \right) + \frac{5}{9} + \frac{1}{3}}{\left(2 + \frac{1}{3} \right) \left(\frac{3}{4} - \frac{4}{7} \right)} + \frac{\frac{5}{9} + \frac{1}{3}}{\frac{4}{3} : \frac{5}{2}} - 8 + \frac{2}{3} \quad \left[\frac{4}{3} \right]$$

$$4 \quad \frac{2 - \left(-\frac{1}{64} \right) \cdot \left(8 + \frac{1}{3} \right)^2 \cdot \left(8 - \frac{1}{2} \right) \cdot \left(-1 - \frac{1}{5} \right)^3 \cdot \left(\frac{1}{3} \right)^2 \cdot \left(1 - \frac{1}{5} \right)^2 - \frac{1}{3}}{\left(\frac{3}{8} - \frac{1}{12} + \frac{5}{6} \right) + \left\{ -\frac{5}{8} + \left[\frac{15}{4} + \left(-\frac{15}{28} - 2 - \frac{3}{4} + \frac{2}{7} \right) \right] \right\}} - \frac{3}{5} \quad \left[-\frac{1}{15} \right]$$

$$5 \quad \frac{\left[\left(\frac{1}{4} - \frac{9}{25} \cdot \frac{5}{18} \right)^2 : \left(1 + \frac{1}{2} \right)^2 - \left(\frac{1}{10} \right)^2 \right] \cdot \left(\frac{7}{20} - 1 \right) + 3 - \frac{1}{4} + \frac{2}{3}}{\left[\left(1 - \frac{1}{3} - \frac{1}{2} \right) \cdot 2 + \left(\frac{2}{3} - \frac{1}{2} + \frac{1}{6} \right) \cdot 3 \right] : \frac{4}{3} + \frac{2}{3}} \quad \left[\frac{41}{20} \right]$$

$$6 \quad \left\{ \left[\left(\frac{1}{2} - \frac{1}{6} \right) + \left(\frac{1}{7} \right)^3 : \left(\frac{1}{7} \right)^2 \right] \cdot \left(\frac{3}{2} \right)^2 \right\} : \left\{ \left[1 - \left(1 + \frac{3}{4} \right)^2 : \left(\frac{1}{8} + \frac{47}{16} \right)^2 \right] - \frac{8}{49} \right\} \quad \left[\frac{21}{10} \right]$$

$$7 \quad \left\{ 1 + \left(\frac{1}{3} + \frac{1}{5} \right)^2 : \left[\left(1 - \frac{7}{15} \right)^4 \cdot \left(\frac{9}{8} + \frac{3}{4} \right)^3 \right] - \left(1 - \frac{3}{5} \right)^2 \cdot 5 \right\} \cdot \left[1 - \left(\frac{3}{2} \right)^4 : \left(\frac{3}{2} + \frac{5}{4} \right)^2 \cdot \left(2 - \frac{7}{9} \right) \right] \quad \left[\frac{2}{15} \right]$$

$$8 \quad \left\{ \left[1 + \left(1 - \frac{3}{5} \right)^2 \cdot \left(\frac{1}{3} + \frac{1}{2} \right) \cdot 5 \right] \cdot \left(\frac{5}{3} \right)^2 \cdot \left(\frac{1}{3} + \frac{4}{15} \right)^2 \right\} \cdot \left[1 + \left(\frac{1}{7} + \frac{2}{21} \right)^2 \cdot \left(\frac{21}{2} \right)^5 : \left(\frac{21}{2} \right)^3 \cdot \frac{2}{5} \right] \quad \left[\frac{35}{6} \right]$$

$$9 \quad \left[\left(\frac{1}{4} - \frac{1}{20} \right)^4 \cdot 5^3 + \left(\frac{7}{5} - \frac{11}{10} \right)^2 : \frac{3}{10} - \frac{1}{15} \right] : \left\{ \left(1 - \frac{2}{3} \right) + \left(\frac{1}{5} + \frac{17}{15} \right)^2 \cdot \left[\left(\frac{3}{2} + 1 \right)^2 \cdot \left(\frac{1}{4} + \frac{1}{20} \right)^2 - \frac{1}{4} \right] \right\} \quad \left[\frac{39}{80} \right]$$

$$10 \quad \left[\left(\frac{5}{4} + \frac{13}{12} \right) \cdot \left(\frac{21}{10} - \frac{21}{20} \right) \cdot \left(\frac{1}{3} + \frac{5}{21} \right) \cdot \frac{4}{7} \right] - \left\{ \left[1 + \left(\frac{1}{2} - \frac{1}{6} \right)^4 : \left(\frac{1}{5} + \frac{2}{15} \right)^2 \right] : \left(\frac{1}{7} + \frac{4}{21} \right)^3 \cdot \left(\frac{4}{15} + \frac{1}{6} + \frac{19}{60} \right)^3 \right\} \quad \left[-\frac{1}{5} \right]$$