

Correzione della verifica di matematica del 19 ottobre 2013

ESERCIZIO 1

trascrivo e controllo $\left(\frac{14}{12} - \frac{1}{2}\right) + \left(\frac{7}{6} + \frac{3}{4} - \frac{3}{2}\right) : \left(\frac{6}{8} + \frac{1}{2}\right) =$

riduco ai minimi termini $\left(\frac{7}{6} - \frac{1}{2}\right) + \left(\frac{7}{6} + \frac{3}{4} - \frac{3}{2}\right) : \left(\frac{3}{4} + \frac{1}{2}\right) =$

determino il mcm $\frac{7-3}{6} + \frac{14+9-18}{12} : \frac{3+2}{4} =$

calcolo i numeratori $\frac{4}{6} + \frac{5}{12} : \frac{5}{4} =$

trasformo la divisione $\frac{2}{3} + \frac{5}{12} \cdot \frac{4}{5} =$

semplifico in croce $\frac{2}{3} + \frac{1}{3} \cdot \frac{1}{1} =$

addiziono e semplifico $\frac{2}{3} + \frac{1}{3} = \frac{3}{3} = 1$

ESERCIZIO 2

trascrivo e controllo $\left(\frac{1}{4} + \frac{1}{16}\right) + \left(2 - \frac{3}{4}\right)^2 : \frac{5}{4} - \left(1 - \frac{3}{4} + \frac{1}{2}\right)^2 =$

detemino il mcm $\frac{4+1}{16} + \left(\frac{8-3}{4}\right)^2 : \frac{5}{4} - \left(\frac{4-3+2}{4}\right)^2 =$

calcolo i numeratori $\frac{5}{16} + \left(\frac{5}{4}\right)^2 : \frac{5}{4} - \left(\frac{3}{4}\right)^2 =$

proprietà delle potenze $\frac{5}{16} + \left(\frac{5}{4}\right)^{2-1} - \left(\frac{3}{4}\right)^2 =$

calcolo le potenze $\frac{5}{16} + \frac{5}{4} - \frac{9}{16} =$

detemino il mcm $\frac{5+20-9}{16} = \frac{16}{16} = 1$

ESERCIZIO 3

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

$$\frac{18+1}{4} : \left[\left(\frac{4-3}{3}\right)^2 \cdot \left(\frac{15+3}{5}\right) + \frac{7}{4} - \left(\frac{15+2}{20}\right)^2 : \left(\frac{20-3}{10}\right)^2\right] + \frac{1}{2} =$$

$$\frac{19}{4} : \left[\left(\frac{1}{3}\right)^2 \cdot \frac{18}{5} + \frac{7}{4} - \left(\frac{17}{20}\right)^2 : \left(\frac{17}{10}\right)^2\right] + \frac{1}{2} =$$

$$\frac{19}{4} : \left[\frac{1}{9} \cdot \frac{18}{5} + \frac{7}{4} - \left(\frac{17}{20} : \frac{17}{10}\right)^2\right] + \frac{1}{2} =$$

$$\frac{19}{4} : \left[\frac{2}{5} + \frac{7}{4} - \left(\frac{17}{20} \cdot \frac{10}{17}\right)^2\right] + \frac{1}{2} =$$

$$\frac{19}{4} : \left[\frac{2}{5} + \frac{7}{4} - \left(\frac{1}{2}\right)^2\right] + \frac{1}{2} =$$

$$\frac{19}{4} : \left[\frac{2}{5} + \frac{7}{4} - \frac{1}{4}\right] + \frac{1}{2} = \rightarrow \text{continua in alto a destra}$$

→ continua dalla colonna in basso a sinistra

$$\frac{19}{4} : \left[\frac{8+35-5}{20}\right] + \frac{1}{2} =$$

$$\frac{19}{4} : \frac{38}{20} + \frac{1}{2} =$$

$$\frac{19}{4} \cdot \frac{20}{38} + \frac{1}{2} =$$

$$\frac{1}{2} \cdot \frac{5}{1} + \frac{1}{2} = \frac{5}{2} + \frac{1}{2} = \frac{6}{2} = 3$$

ESERCIZIO 4

NB In questo esercizio bisogna applicare le proprietà delle potenze

$$\left[\left(\frac{3}{5}\right)^2 \cdot \left(\frac{3}{5}\right)^3\right]^2 : \left(\frac{3}{5}\right)^8 =$$

$$\left[\left(\frac{3}{5}\right)^5\right]^2 : \left(\frac{3}{5}\right)^8 =$$

$$\left(\frac{3}{5}\right)^{10} : \left(\frac{3}{5}\right)^8 =$$

$$\left(\frac{3}{5}\right)^2 = \frac{9}{25}$$

ESERCIZIO 5

NB In questo esercizio bisogna applicare le proprietà delle potenze

$$\left[\left(\frac{2}{3}\right)^4 \cdot \left(\frac{2}{3}\right)^{2^3}\right] : \left(\frac{2}{3}\right)^9 : \left[\left(\frac{2}{3}\right)^2 \cdot \frac{2}{3}\right]^3 =$$

$$\left[\left(\frac{2}{3}\right)^6\right]^3 : \left(\frac{2}{3}\right)^9 : \left[\left(\frac{2}{3}\right)^3\right]^3 =$$

$$\left(\frac{2}{3}\right)^{18} : \left(\frac{2}{3}\right)^9 : \left(\frac{2}{3}\right)^9 =$$

$$\left(\frac{2}{3}\right)^9 : \left(\frac{2}{3}\right)^9 = \left(\frac{2}{3}\right)^0 = 1 \text{ oppure anche:}$$

$$\left(\frac{2}{3} : \frac{2}{3}\right)^9 = 1^9 = 1$$