

1 OPERATORE ELETTRICO

MATEMATICA: correzioni

ESERCITAZIONE 10

$$\bullet \frac{1}{9} - \frac{1}{12} + \left(\frac{1}{8} - \frac{23}{9} \right) - \left[\frac{3}{8} + \left(\frac{1}{3} - \frac{5}{2} \right) - \frac{1}{6} \right] + \frac{4}{9} \quad [0]$$

$$\frac{1}{9} - \frac{1}{12} + \left(\frac{9-184}{72} \right) - \left[\frac{3}{8} + \left(\frac{2-15}{6} \right) - \frac{1}{6} \right] + \frac{4}{9}$$

$$\frac{1}{9} - \frac{1}{12} + \left(\frac{-175}{72} \right) - \left[\frac{3}{8} + \left(\frac{-13}{6} \right) - \frac{1}{6} \right] + \frac{4}{9}$$

$$\frac{1}{9} - \frac{1}{12} - \frac{175}{72} - \left[\frac{3}{8} - \frac{13}{6} - \frac{1}{6} \right] + \frac{4}{9}$$

$$\frac{1}{9} - \frac{1}{12} - \frac{175}{72} - \left[\frac{9-52-4}{24} \right] + \frac{4}{9}$$

$$\frac{1}{9} - \frac{1}{12} - \frac{175}{72} - \left[\frac{-47}{24} \right] + \frac{4}{9}$$

$$\frac{1}{9} - \frac{1}{12} - \frac{175}{72} + \frac{47}{24} + \frac{4}{9}$$

$$\frac{8-6-175+141+32}{72} = \frac{0}{72} = 0$$

$$\bullet \left(\frac{4}{9} \cdot \frac{6}{2} - \frac{12}{9} \right) \cdot \frac{4}{3} - \frac{5}{9} \cdot \left(\frac{3}{2} - \frac{4}{9} - \frac{1}{9} \right) : \frac{10}{9} + 1 \quad \left[\frac{19}{36} \right]$$

semplifico a croce $\left(\frac{4}{9} \cdot \frac{6}{2} - \frac{12}{9} \right) \cdot \frac{4}{3} - \frac{5}{9} \cdot \left(\frac{3}{2} - \frac{4}{9} - \frac{1}{9} \right) : \frac{10}{9} + 1$

moltiplico $\left(\frac{2}{3} \cdot \frac{2}{1} - \frac{12}{9} \right) \cdot \frac{4}{3} - \frac{5}{9} \cdot \left(\frac{27-8-2}{18} \right) : \frac{10}{9} + 1$

$\left(\frac{4}{3} - \frac{12}{9} \right) \cdot \frac{4}{3} - \frac{5}{9} \cdot \left(\frac{17}{18} \right) : \frac{10}{9} + 1$ le divisioni devono essere trasformate in moltiplicazioni

$$\left(\frac{12-12}{9} \right) \cdot \frac{4}{3} - \frac{5}{9} \cdot \left(\frac{17}{18} \right) \cdot \frac{9}{10} + 1$$

$(0) \cdot \frac{4}{3} - \frac{5}{9} \cdot \left(\frac{17}{18} \right) \cdot \frac{9}{10} + 1$ moltiplico semplificando a croce

$$0 - \frac{17}{36} + 1 = \frac{-17 + 36}{36} = \frac{19}{36}$$

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

$$\left\{ \left[\left(\frac{4-1}{6} \right) \cdot \frac{3}{2} - \frac{1}{4} \right] - \frac{1}{5} \cdot \left[15 \cdot \left(\frac{6-1}{3} \right) - \frac{5}{3} \right] \right\} + \frac{+3-8+48}{12}$$

$$\left\{ \left[\left(\frac{3}{6} \right) \cdot \frac{3}{2} - \frac{1}{4} \right] - \frac{1}{5} \cdot \left[15 \cdot \left(\frac{5}{3} \right) - \frac{5}{3} \right] \right\} + \frac{43}{12} \text{ semplifico a croce}$$

$$\left\{ \left[\frac{3}{4} - \frac{1}{4} \right] - \frac{1}{5} \cdot \left[25 - \frac{5}{3} \right] \right\} + \frac{43}{12}$$

$$\left\{ \left[\frac{3-1}{4} \right] - \frac{1}{5} \cdot \left[\frac{75-5}{3} \right] \right\} + \frac{43}{12}$$

$$\left\{ \frac{2}{4} - \frac{1}{5} \cdot \left[\frac{70}{3} \right] \right\} + \frac{43}{12} \text{ semplificare anche in verticale}$$

$$\left\{ \frac{1}{2} - \frac{14}{3} \right\} + \frac{43}{12} = \left\{ \frac{3-28}{6} \right\} + \frac{43}{12}$$

$$-\frac{25}{6} + \frac{43}{12} = \frac{-50+43}{12} = -\frac{7}{12}$$

$$\bullet \left\{ \left[-\frac{1}{5} \cdot \left(\frac{3}{2} + 1 \right) + \frac{3}{2} \right] : \frac{5}{4} + \left(3 - \frac{2}{3} \right) \cdot \left(-\frac{1}{5} - \frac{2}{7} \right) \right\} : \frac{4}{3} - \frac{1}{12} \quad \left[-\frac{1}{3} \right]$$

$$\left\{ \left[-\frac{1}{5} \cdot \left(\frac{3+2}{2} \right) + \frac{3}{2} \right] : \frac{5}{4} + \left(\frac{9-2}{3} \right) \cdot \left(\frac{-7-10}{35} \right) \right\} : \frac{4}{3} - \frac{1}{12}$$

$$\left\{ \left[-\frac{1}{5} \cdot \left(\frac{5}{2} \right) + \frac{3}{2} \right] : \frac{5}{4} + \frac{7}{3} \cdot \left(-\frac{17}{35} \right) \right\} : \frac{4}{3} - \frac{1}{12}$$

$$\left\{ \left[-\frac{1}{2} + \frac{3}{2} \right] : \frac{5}{4} - \frac{17}{15} \right\} : \frac{4}{3} - \frac{1}{12} \quad \text{trasformare : in x}$$

$$\left\{ \left[\frac{-1+3}{2} \right] \cdot \frac{4}{5} - \frac{17}{15} \right\} \cdot \frac{3}{4} - \frac{1}{12}$$

$$\left\{ \left[\frac{2}{2} \right] \cdot \frac{4}{5} - \frac{17}{15} \right\} \cdot \frac{3}{4} - \frac{1}{12}$$

$$\left\{ \frac{4}{5} - \frac{17}{15} \right\} \cdot \frac{3}{4} - \frac{1}{12} = \left\{ \frac{12-17}{15} \right\} \cdot \frac{3}{4} - \frac{1}{12}$$

$$\left\{ \frac{-5}{15} \right\} \cdot \frac{3}{4} - \frac{1}{12} = -\frac{1}{4} - \frac{1}{12}$$

$$\frac{-3-1}{12} = -\frac{4}{12} = -\frac{1}{3}$$

$$\bullet \left\{ \left[\left(\frac{1}{7} - \frac{2}{2} \right) \cdot \left(3 + \frac{1}{2} \right) - \left(\frac{4}{3} - \frac{1}{6} \right) \cdot \left(\frac{1}{7} - 4 \right) \right] \cdot \frac{16}{3} \right\} - \left(\frac{1}{12} + \frac{31}{4} \right) \quad \left[\frac{1}{6} \right]$$

semplifico e diventa 1

$$\left\{ \left[\left(\frac{1-7}{7} \right) \cdot \left(\frac{6+1}{2} \right) - \left(\frac{8-1}{6} \right) \cdot \left(\frac{1-28}{7} \right) \right] \cdot \frac{16}{3} \right\} - \left(\frac{1+93}{12} \right)$$

$$\left\{ \left[-\frac{6}{7} \cdot \frac{7}{2} - \frac{7}{6} \cdot \left(-\frac{27}{7} \right) \right] \cdot \frac{16}{3} \right\} - \frac{94}{12} \quad \text{semplifico a croce e in verticale}$$

$$\left\{ \left[-3 + \frac{9}{2} \right] \cdot \frac{16}{3} \right\} - \frac{47}{6}$$

$$\left\{ \left[\frac{-6+9}{2} \right] \cdot \frac{16}{3} \right\} - \frac{47}{6}$$

$$\left\{ \frac{3}{2} \cdot \frac{16}{3} \right\} - \frac{47}{6} = 8 - \frac{47}{6} = \frac{48-47}{6} = \frac{1}{6}$$

$$\bullet \left[1 + \frac{2}{3} - \left(1 - \frac{1}{2} \right) \cdot 3 \right] \cdot \left[1 - \frac{2}{3} \cdot \left(2 - \frac{6}{5} \right) - \frac{3}{15} \right] \cdot \left(2 - \frac{5}{7} \right) : \frac{2}{7} \quad \left[\frac{1}{5} \right]$$

$$\left[1 + \frac{2}{3} - \left(\frac{2-1}{2} \right) \cdot 3 \right] \cdot \left[1 - \frac{2}{3} \cdot \left(\frac{10-6}{5} \right) - \frac{3}{15} \right] \cdot \left(\frac{14-5}{7} \right) : \frac{2}{7}$$

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

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

$$\left[\frac{6+4-9}{6} \right] \cdot \left[\frac{15-8-3}{15} \right] \cdot \left(\frac{9}{7} \right) \cdot \frac{7}{2}$$

$$\text{semplifichiamo a croce} \quad \frac{1}{6} \cdot \frac{4}{15} \cdot \frac{9}{7} \cdot \frac{7}{2} = \frac{1}{5}$$

Problema

- La distanza Terni- Perugia in una scala 1:1250000 è di 5cm.
Quanto distano realmente le due città?

cm carta = 5 cm

1:val scala=cm carta: cm reali

valore in scala = 1250000

cm reali = val scala x cm carta = 1250000x5=6250000 cm = **62,5 km**

INVIARE VIA MAIL (l.vertolomo@padrisomaschi.it) preferibilmente entro

mercoledì 18 Marzo 2020

TEST DI VERIFICA UD2

- Calcola MCD e mcm: 24 e 28
- $\frac{3}{4} + \frac{1}{4}$
- $\frac{2}{3} + \frac{2}{6}$
- $\frac{4}{9} + \frac{10}{18}$
- $\frac{5}{9} \cdot \frac{3}{5}$
- $\frac{1}{8} \cdot \frac{4}{7}$
- $\frac{25}{8} \cdot \frac{16}{75}$
- $\left(\frac{2}{5} - \frac{2}{3}\right) \cdot \left(\frac{1}{2} - \frac{4}{3}\right)$
- $\frac{1}{9} - \left(\frac{3}{2} + \frac{5}{6}\right) + \frac{2}{3} + \left[\frac{1}{9} - \left(\frac{1}{2} + \frac{5}{9} - \frac{1}{6}\right) + \frac{5}{3}\right]$
- Due città distano sulla carta in vostro possesso 3 cm. Determina la distanza reale che le separa, in chilometri, sapendo che la scala è 1:100000.