

Teste de evaluare

E

Testul 1

$$\begin{aligned}
 1. \quad a) \quad & \left[\frac{3}{4} + \frac{2}{3} : \left(\frac{3}{4} - \frac{2}{2} \right) \right] \cdot \frac{6}{41} = \left[\frac{3}{4} + \frac{2}{3} : \left(\frac{3}{4} - \frac{2}{4} \right) \right] \cdot \frac{6}{41} = \\
 & = \left(\frac{3}{4} + \frac{2}{3} : \frac{1}{4} \right) \cdot \frac{6}{41} = \left(\frac{3}{4} + \frac{2}{3} \cdot \frac{4}{1} \right) \cdot \frac{6}{41} = \\
 & = \left(\frac{3}{4} + \frac{8}{3} \right) \cdot \frac{6}{41} = \left(\frac{9}{12} + \frac{32}{12} \right) \cdot \frac{6}{41} = \frac{41}{12} \cdot \frac{6}{41} = \frac{1}{2}
 \end{aligned}$$

$$\begin{aligned}
 b) \quad & \left[\frac{7}{5} : \frac{14}{15} + \frac{3}{2} : \left(\frac{9}{4} - 1 \frac{1}{2} \right) \right] \cdot \frac{2}{7} = \\
 & = \left[\frac{7}{5} : \frac{14}{15} + \frac{3}{2} : \left(\frac{9}{4} - \frac{1 \cdot 2 + 1}{2} \right) \right] \cdot \frac{2}{7} = \\
 & = \left[\frac{7}{5} \cdot \frac{15}{14} + \frac{3}{2} : \left(\frac{9}{4} - \frac{2}{2} \right) \right] \cdot \frac{2}{7} = \left[\frac{3}{2} + \frac{3}{2} : \left(\frac{9}{4} - \frac{6}{4} \right) \right] \cdot \frac{2}{7} = \\
 & = \left(\frac{3}{2} + \frac{3}{2} : \frac{3}{4} \right) \cdot \frac{2}{7} = \left(\frac{3}{2} + \frac{3}{2} \cdot \frac{4}{3} \right) \cdot \frac{2}{7} = \left(\frac{3}{2} + \frac{2}{2} \right) \cdot \frac{2}{7} = \\
 & = \left(\frac{3}{2} + \frac{4}{2} \right) \cdot \frac{2}{7} = \frac{7}{2} \cdot \frac{2}{7} = 1
 \end{aligned}$$

$$\begin{aligned}
 c) \quad & \left[5 \frac{2}{3} + 1, (5) - 2 \right] : 15 \frac{2}{3} = \left(\frac{5 \cdot 3 + 2}{3} + 1 \frac{5}{9} - 2 \right) : \frac{15 \cdot 3 + 2}{3} = \\
 & = \left(\frac{17}{3} + \frac{14}{9} - \frac{9}{9} \right) : \frac{47}{3} = \left(\frac{51}{9} + \frac{14}{9} - \frac{18}{9} \right) : \frac{47}{3} = \frac{47}{9} \cdot \frac{3}{47} = \frac{1}{3}
 \end{aligned}$$

$$\begin{aligned}
 d) & \left[4 + 6 \frac{2}{3} - 2 \frac{1}{4} \cdot \left(\frac{3}{3} - \frac{2}{9} \right) \right] : 4 \frac{5}{6} + \frac{29}{4} = \\
 & = \left[\frac{3}{4} + \frac{20}{3} - \frac{9}{4} \cdot \left(\frac{6}{9} - \frac{2}{9} \right) \right] : \frac{29}{6} + \frac{29}{4} = \\
 & = \left(\frac{12+20}{3} - \frac{9}{4} \cdot \frac{4}{9} \right) \cdot \frac{6}{29} + \frac{29}{4} = \left(\frac{32}{3} - \frac{3}{1} \right) \cdot \frac{6}{29} + \frac{29}{4} = \\
 & = \frac{32-3}{3} \cdot \frac{6}{29} + \frac{29}{4} = \frac{29}{3} \cdot \frac{6}{29} + \frac{29}{4} = \frac{6}{1} + \frac{29}{4} = \frac{8+29}{4} = \\
 & = \frac{37}{4}
 \end{aligned}$$

$$2. \quad a) \quad \frac{25}{2} \cdot 9 = \frac{25 \cdot 9}{2} = \frac{225}{2}$$

$$b) \quad \frac{28}{13} : 7 = \frac{28}{13} \cdot \frac{1}{7} = \frac{4}{13}$$

$$3. \quad x = \frac{2}{3} \quad \text{in} \quad y = \frac{9}{5}$$

$$7x + 4y = 7 \cdot \frac{2}{3} + 4 \cdot \frac{9}{5} = \frac{14}{3} + \frac{36}{5} = \frac{70+108}{15} = \frac{178}{15}$$

N.C. = 15

$$4. \quad 3 \frac{2}{5} \cdot 2 \frac{1}{4} = \frac{3 \cdot 5 + 2}{5} \cdot \frac{2 \cdot 4 + 1}{4} = \frac{17}{5} \cdot \frac{9}{4} = \frac{153}{20}$$

$$5. \quad a) \quad \left(x + 2 \frac{8}{15} \right) \cdot \frac{3}{2} = 5 \frac{1}{4} \quad (\Rightarrow) \quad \left(x + \frac{2 \cdot 15 + 8}{15} \right) \cdot \frac{3}{2} = \frac{5 \cdot 4 + 1}{4} \quad (\Rightarrow)$$

$$(\Rightarrow) \quad \left(x + \frac{38}{15} \right) \cdot \frac{3}{2} = \frac{21}{4} \quad (\Rightarrow) \quad x + \frac{38}{15} = \frac{21}{4} : \frac{3}{2} \quad (\Rightarrow) \quad x + \frac{38}{15} = \frac{21}{4} \cdot \frac{2}{3} \quad (\Rightarrow)$$

$$(\Rightarrow) \quad x + \frac{38}{15} = \frac{7}{2} \quad (\Rightarrow) \quad x = \frac{7}{2} - \frac{38}{15} \quad (\Rightarrow) \quad x = \frac{105 - 76}{30} \quad (\Rightarrow) \quad x = \frac{29}{30}$$

$$b) \frac{109}{50} : y = \frac{109}{1000} \Leftrightarrow y = \frac{109}{50} : \frac{109}{1000} \Leftrightarrow y = \frac{109}{50} \cdot \frac{1000}{109} \Rightarrow$$

$$\Rightarrow y = 20$$

$$6. \quad 15 \cdot 1\frac{1}{5} + 8 \cdot 2\frac{3}{10} = 15 \cdot \frac{5 \cdot 1 + 1}{5} + 8 \cdot \frac{2 \cdot 10 + 3}{10} =$$

$$= 15 \cdot \frac{6}{5} + 8 \cdot \frac{23}{10} = \frac{5}{1} \cdot \frac{6}{5} + \frac{4}{5} \cdot \frac{23}{5} =$$

$$= \frac{90}{5} + \frac{92}{5} = \frac{182}{5} \text{ m (necesari pentru 15 pantaloni si 8 costume)}$$

$$54 \frac{17}{20} - \frac{182}{5} = \frac{54 \cdot 20 + 17}{20} - \frac{182}{5} = \frac{1097}{20} - \frac{182}{5} =$$

$$= \frac{1097 - 728}{20} = \frac{369}{20} \text{ m de stofa rămasă}$$

$$R: \frac{369}{20} = 18\frac{9}{20} \text{ m stofa rămasă}$$