

Fisă pentru portofoliul individual
A3

1. a) $\frac{2}{3} + \frac{5}{8} = \frac{6}{8} + \frac{5}{8} = \frac{11}{8}$

b) $9 : \frac{9}{5} = \cancel{9} \cdot \frac{5}{\cancel{9}} = 5$

c) $\left(\frac{2}{5}\right)^3 = \frac{2^3}{5^3} = \frac{8}{125}$

2. a) Orice număr rațional pozitiv nenul are un invers (A)

b) Dublul lui $\frac{1}{5}$ este 5 (F)

$$2 \cdot \frac{1}{5} = 5 \Rightarrow \frac{2}{5} = 5 \text{ (F)}$$

c) $\left(\frac{3}{7}\right)^4 < \left(\frac{3}{7}\right)^{10}$ (A)

$$4 < 10$$

3. a) $\rightarrow 2) 5$

$$\frac{1}{5} \rightarrow 5$$

b) $\rightarrow 4) \frac{1}{2}$

$$\frac{3}{4} + \frac{2}{6} + \frac{1}{12} = \frac{3}{12} + \frac{2}{12} + \frac{1}{12} = \frac{6}{12} = \frac{1}{2}$$

c) $\rightarrow 5) 1$

$$\frac{20}{35} : \left(\frac{4}{7}\right) = \frac{20}{35} \cdot \frac{7}{4} = 1$$

$$d) \rightarrow 3) 0$$

$$\left(\frac{\frac{6}{3} + \frac{4}{3} + \frac{3}{3}}{2}\right)^2 \cdot \left(\frac{2}{4} - \frac{1}{4} - \frac{1}{6} - \frac{1}{12}\right) = \left(\frac{18}{12} + \frac{16}{12} + \frac{15}{12}\right)^2 \cdot \left(\frac{3}{4} - \frac{2}{6} - \frac{1}{12}\right) =$$

N.C. = 12

$$= \left(\frac{49}{12}\right)^2 \cdot \frac{3-2-1}{12} = \left(\frac{49}{12}\right)^2 \cdot \frac{0}{12} = \left(\frac{49}{12}\right)^2 \cdot 0 = 0$$

$$4. a = \left[\left(\frac{2}{2} + \frac{5}{4} - \frac{3}{4}\right) : 5 + \frac{2}{5}\right]^5 = \left[\left(\frac{10}{4} + \frac{5}{4} - \frac{3}{4}\right) : 5 + \frac{2}{5}\right]^5 =$$

$$= \left(\frac{12}{4} : 5 + \frac{2}{5}\right)^5 = \left(\frac{12}{4} \cdot \frac{1}{5} + \frac{2}{5}\right)^5 = \left(\frac{12}{20} + \frac{4}{20}\right)^5 =$$

$$= \left(\frac{12}{20} + \frac{8}{20}\right)^5 = \left(\frac{20}{20}\right)^5 = 1^5 = 1 \Rightarrow a = 1$$

$$b = \left(2\frac{1}{3} + 3\frac{1}{2}\right) : \frac{7}{12} - \left[3\frac{1}{3} : \frac{1}{3} - 3 : \frac{3}{10} + \frac{3}{2} : \left(\frac{1}{2}\right)^2\right] =$$

$$= \left(\frac{7}{3} + \frac{7}{2}\right) \cdot \frac{12}{7} - \left(\frac{10}{3} \cdot \frac{1}{1} - 3 \cdot \frac{10}{3} + \frac{3}{2} : \frac{1}{4}\right) =$$

N.C. = 6

$$= \left(\frac{14}{6} + \frac{21}{6}\right) \cdot \frac{12}{7} - \left(10 - 10 + \frac{3}{2} \cdot \frac{4}{1}\right) = \frac{35}{6} \cdot \frac{12}{7} - 6 =$$

$$= 5 \cdot 2 - 6 = 10 - 6 = 4 \Rightarrow b = 4$$

$$a < b$$

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

$$= \left[\left(\frac{8}{2} \cdot \frac{1}{2} \right) + \frac{1}{3} \right]^2 : \frac{7}{9} = \left(\frac{3}{4} + \frac{4}{3} \right)^2 : \frac{7}{9} = \left(\frac{24}{12} + \frac{16}{12} \right)^2 \cdot \frac{9}{7} =$$

N.C. = 12

$$= \left(\frac{28}{12} \right)^2 \cdot \frac{9}{7} = \left(\frac{7}{3} \right)^2 \cdot \frac{9}{7} = \frac{49}{9} \cdot \frac{9}{7} = 7$$

N.C. = numitorul comun