$$A = \frac{15}{39} \times \frac{26}{25} \times \frac{28}{42} = \frac{3 \times 5 \times 13 \times 2 \times 2 \times 2 \times 7}{13 \times 3 \times 5 \times 5 \times 2 \times 3 \times 7} = \frac{4}{15}$$

$$B = -\frac{6}{35} + \frac{4}{5} - \frac{3}{4} = -\frac{6}{35} + \frac{28}{35} - \frac{3}{4} = \frac{22}{35} - \frac{3}{4} = \frac{88}{140} - \frac{105}{140} = -\frac{17}{140}$$

$$C = \frac{20}{28} + \frac{3}{14} \times \frac{4}{9} = \frac{5 \times 4}{7 \times 4} + \frac{3 \times 2 \times 2}{2 \times 7 \times 3 \times 3} = \frac{5}{7} + \frac{2}{21} = \frac{15}{21} + \frac{2}{21} = \frac{17}{21}$$

$$D = \frac{-16}{17} \times \frac{77}{16} \times \frac{1}{-11} \times \frac{2}{21} \times \frac{-51}{2} = -\frac{16 \times 7 \times 11 \times 2 \times 3 \times 17}{17 \times 16 \times 11 \times 7 \times 3 \times 2} = -1$$

$$E = 13 \times \frac{49}{45} \times \frac{72}{91} = \frac{13 \times 7 \times 7 \times 8 \times 9}{5 \times 9 \times 13 \times 7} = \frac{56}{5} \qquad O = \frac{3 : \frac{3}{4}}{\frac{7}{5} : 7} = \frac{3 \times \frac{4}{3}}{\frac{7}{5} \times \frac{1}{7}} = \frac{4}{\frac{1}{5}} = 4 \times 5 = 20$$

$$F = \left(1 - \frac{1}{3}\right)\left(\frac{2}{5} + 1 - \frac{1}{2}\right) = \frac{2}{3}\left(\frac{4}{10} + \frac{10}{10} - \frac{5}{10}\right) = \frac{2}{3} \times \frac{9}{10} = \frac{2 \times 3 \times 3}{3 \times 2 \times 5} = \frac{3}{5}$$

$$G = \frac{3 - \frac{2}{5} + \frac{4}{3}}{2 + \frac{4}{5} - \frac{2}{3}} = \frac{\frac{45}{15} - \frac{6}{15} + \frac{20}{15}}{\frac{30}{15} + \frac{12}{15} - \frac{10}{15}} = \frac{\frac{59}{15}}{\frac{32}{15}} = \frac{59}{15} \times \frac{15}{32} = \frac{59}{32}$$

$$H = \frac{6 - \frac{5}{2} + \frac{3}{8}}{3 - \frac{5}{2} - \frac{7}{4}} = \frac{\frac{48}{8} - \frac{20}{8} + \frac{3}{8}}{\frac{12}{4} - \frac{10}{4} - \frac{7}{4}} = \frac{\frac{31}{8}}{-\frac{5}{4}} = -\frac{31}{2 \times 4} \times \frac{4}{5} = -\frac{31}{10}$$

$$I = \left(\frac{3}{4} - \frac{5}{3}\right) \times \frac{2 - \frac{4}{7}}{3} \times \frac{1}{\frac{4}{3} - \frac{1}{2}} = \left(\frac{9}{12} - \frac{20}{12}\right) \times \frac{\frac{14}{7} - \frac{4}{7}}{3} \times \frac{1}{\frac{8}{6} - \frac{3}{6}} \qquad J = \frac{1 + \frac{1}{3}}{\frac{1}{4} - 2} = \frac{\frac{4}{3}}{-\frac{7}{4}} = -\frac{4}{3} \times \frac{4}{7} = -\frac{16}{21}$$

$$I = -\frac{11}{12} \times \frac{10}{7} \times \frac{1}{3} \times \frac{1}{\frac{5}{6}} = -\frac{11}{2 \times 6} \times \frac{2 \times 5}{7} \times \frac{1}{3} \times \frac{6}{5} = -\frac{11}{21}$$

$$K = \frac{6}{7}\left(\frac{1}{3} - \frac{1}{6}\right) = \frac{6}{7}\left(\frac{2}{6} - \frac{1}{6}\right) = \frac{6}{7} \times \frac{1}{6} = \frac{1}{7}$$

$$L = \frac{\frac{1}{1 - \pi} - \frac{1}{1 + \pi}}{1 + \frac{1}{\pi^2 - 1}} = \frac{\frac{1 + \pi}{(1 + \pi)(1 - \pi)} - \frac{1 - \pi}{(1 + \pi)(1 - \pi)}}{\frac{\pi^2 - 1}{\pi^2 - 1} + \frac{1}{\pi^2 - 1}} = \frac{\frac{1 + \pi - (1 - \pi)}{1 - \pi^2}}{\frac{\pi^2}{\pi^2 - 1}} = \frac{2\pi}{1 - \pi^2} \times \frac{\pi^2 - 1}{\pi^2} = -\frac{2}{\pi}$$

car $\pi^2 - 1 = -(1 - \pi^2)$

$$M = \frac{7 - \dfrac{4}{\pi}}{12 - 21\pi} = \frac{\dfrac{7\pi}{\pi} - \dfrac{4}{\pi}}{3(4 - 7\pi)} = \frac{7\pi - 4}{\pi} \times \frac{1}{-3(7\pi - 4)} = -\frac{1}{3\pi}$$

$$N = \frac{0,3 - \dfrac{1}{100} + 0,03}{\dfrac{3}{4} + \dfrac{1}{100} - 0,04} = \frac{\dfrac{30}{100} - \dfrac{1}{100} + \dfrac{3}{100}}{\dfrac{75}{100} + \dfrac{1}{100} - \dfrac{4}{100}} = \frac{\dfrac{32}{100}}{\dfrac{72}{100}} = \frac{8 \times 4}{100} \times \frac{100}{8 \times 9} = \frac{4}{9}$$

$$P = \left(\frac{1}{2} + \frac{5}{3}\right) \times \left(3 + \frac{7}{4}\right) : \left(\frac{1}{2} - \frac{5}{6}\right) = \left(\frac{3}{6} + \frac{10}{6}\right) \times \left(\frac{12}{4} + \frac{7}{4}\right) : \left(\frac{3}{6} - \frac{5}{6}\right) = \frac{13}{6} \times \frac{19}{4} : \left(-\frac{2}{6}\right) = \frac{13 \times 19}{3 \times 2 \times 4} \times (-3) = -\frac{247}{8}$$

$$Q = \frac{\dfrac{1}{3} + \dfrac{1}{2} - \dfrac{3}{7}}{\dfrac{2}{3} - \dfrac{4}{7} + \dfrac{1}{6}} = \frac{\dfrac{14}{42} + \dfrac{21}{42} - \dfrac{18}{42}}{\dfrac{28}{42} - \dfrac{24}{42} + \dfrac{7}{42}} = \frac{\dfrac{17}{42}}{\dfrac{11}{42}} = \frac{17}{42} \times \frac{42}{11} = \frac{17}{11}$$

**N°52 p 27**

$A = (3x - 1)(x - 2) - 3x(2 - x)$
$A = (3x - 1)(x - 2) + 3x(x - 2)$
$A = (x - 2)(3x - 1 + 3x)$
$A = (x - 2)(6x - 1)$

$B = (5 + x)(4 - 3x) + (3x - 4)(x - 4)$
$B = (5 + x)(4 - 3x) - (4 - 3x)(x - 4)$
$B = (4 - 3x)(5 + x - (x - 4))$
$B = (4 - 3x) \times 9$
$B = 9(4 - 3x)$

**N°53 p27**

$C = (2x + 1)(3 - x) - (x - 3)(3x - 5)$
$C = (2x + 1)(3 - x) + (3 - x)(3x - 5)$
$C = (3 - x)(2x + 1 + 3x - 5)$
$C = (3 - x)(5x - 4)$

$D = (4x - 8)(1 - 2x) - (9x - 18)(5 - x)$
$D = 4(x - 2)(1 - 2x) - 9(x - 2)(5 - x)$
$D = (x - 2)[4(1 - 2x) - 9(5 - x)]$
$D = (x - 2)(4 - 8x - 45 + 9x)$
$D = (x - 2)(x - 41)$