

Exercice 1

$$J = \frac{5}{2} + \frac{8}{3}$$

$$J = \frac{15}{6} + \frac{16}{6}$$

$$J = \frac{31}{6}$$

$$K = \frac{4}{7} + \frac{1}{6}$$

$$K = \frac{24}{42} + \frac{7}{42}$$

$$K = \frac{31}{42}$$

$$L = \frac{7}{4} + \frac{3}{5}$$

$$L = \frac{35}{20} + \frac{12}{20}$$

$$L = \frac{47}{20}$$

$$M = \frac{6}{5} + \frac{5}{6}$$

$$M = \frac{36}{30} + \frac{25}{30}$$

$$M = \frac{61}{30}$$

Exercice 2

$$a) \frac{2}{5} \times \frac{5}{7} = \frac{2 \times \cancel{5}}{\cancel{5} \times 7} = \frac{2}{7}$$

$$b) \frac{41}{13} \times \frac{13}{27} = \frac{41 \times \cancel{13}}{\cancel{13} \times 27} = \frac{41}{27}$$

$$c) \frac{32}{14} \times \frac{15}{32} = \frac{\cancel{32} \times 15}{14 \times \cancel{32}} = \frac{15}{14}$$

$$d) \frac{99}{100} \times \frac{100}{101} = \frac{99 \times \cancel{100}}{\cancel{100} \times 101} = \frac{99}{101}$$

Exercise 3

$$A = \frac{5}{7} : \frac{15}{2} = \frac{5}{7} \times \frac{2}{15} = \frac{\cancel{5} \times 2}{7 \times \cancel{3} \times \cancel{5}} = \frac{2}{21}$$

$$B = \frac{4}{3} : \frac{7}{9} = \frac{4}{3} \times \frac{9}{7} = \frac{4 \times \cancel{3} \times 3}{\cancel{3} \times 7} = \frac{12}{7}$$

$$C = \frac{12}{5} : \frac{6}{7} = \frac{12}{5} \times \frac{7}{6} = \frac{\cancel{6} \times 2 \times 7}{5 \times \cancel{6}} = \frac{14}{5}$$

$$D = \frac{9}{2} : \frac{3}{4} = \frac{9}{2} \times \frac{4}{3} = \frac{\cancel{3} \times \cancel{3} \times 2 \times 2}{2 \times \cancel{3}} = 6$$

$$E = \frac{3}{5} : \frac{-9}{25} = -\frac{3}{5} \times \frac{25}{9} = -\frac{\cancel{3} \times \cancel{5} \times 5}{\cancel{3} \times \cancel{3} \times 3} = -\frac{5}{3}$$

$$F = \frac{7}{16} : \frac{5}{4} = \frac{7}{16} \times \frac{4}{5} = \frac{7 \times \cancel{4}}{\cancel{4} \times \cancel{4} \times 5} = \frac{7}{20}$$

Exercise 4

$$Y = \frac{1}{5} - \frac{3}{10} \times \frac{1}{6} + \frac{1}{2}$$

$$Y = \frac{1}{5} - \frac{1}{20} + \frac{1}{2}$$

$$Y = \frac{4}{20} - \frac{1}{20} + \frac{10}{20}$$

$$Y = \frac{13}{20}$$

$$Z = \left(\frac{1}{5} - \frac{3}{10} \right) \times \left(\frac{1}{6} + \frac{1}{2} \right)$$

$$Z = \left(\frac{2}{10} - \frac{3}{10} \right) \times \left(\frac{1}{6} + \frac{3}{6} \right)$$

$$Z = -\frac{1}{10} \times \frac{4}{6}$$

$$Z = -\frac{1 \times 2 \times 2}{5 \times 2 \times 3}$$

$$Z = -\frac{1}{15}$$