

سلسلة تمارين العمليات على الأعداد الكسرية

تمرين 1

أحسب ما يلي ثم اختزل إذا كان ممكنا :

$$\begin{array}{lcl} \frac{7,5}{1,2} + \frac{2,5}{1,2} & \therefore & \frac{23}{11} + \frac{10}{11} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{8}{2} + \frac{8}{2} & \therefore & \frac{2,5}{13} + \frac{10,5}{13} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{22}{3} + \frac{2}{3} & \therefore & \frac{25}{7} + \frac{6}{7} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{11}{5} + \frac{15}{5} & & \end{array}$$

$$\begin{array}{lcl} \frac{8}{7} - \frac{8}{7} & \therefore & \frac{7,5}{12} - \frac{3,5}{12} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{40}{43} - \frac{28}{43} & \therefore & \frac{96}{65} - \frac{71}{65} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{9}{13} - \frac{6}{13} & \therefore & \frac{35}{42} - \frac{26}{42} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{25}{16} - \frac{15}{16} & \therefore & \frac{25}{42} - \frac{16}{42} \\ \therefore & & \therefore \end{array}$$

تمرين 2

أحسب ما يلي مع الاختزال إذا كان ممكنا :

$$\begin{array}{lcl} \frac{12}{22} + \frac{32}{22} & \therefore & \frac{36}{15} + \frac{11}{5} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{14}{5} + 6 & \therefore & \frac{12}{100} + \frac{32}{25} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} 6,3 + \frac{27}{5} & \therefore & \frac{17}{6} + 2 \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{12}{3} + \frac{7}{9} & & \end{array}$$

تمرين 3

أحسب ما يلي ثم اختزل إذا كان ممكنا :

$$\begin{array}{lcl} \frac{2,5}{2} - \frac{3}{5} & \therefore & 1 - \frac{30}{71} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{34}{5} - 4,5 & \therefore & \frac{12}{7} - \frac{12}{49} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} 7,5 - \frac{32}{10} & \therefore & \frac{17}{6} - \frac{13}{12} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{1}{6} - \frac{5}{36} & & \end{array}$$

$$\begin{array}{lcl} 16 - \frac{10}{9} & \therefore & \frac{90}{49} - \frac{1}{0,7} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{1}{2,5} - 0,05 & \therefore & 0,65 - \frac{7}{25} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{11}{9} - \frac{1}{3} & \therefore & \frac{8}{5} - 5,1 \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{20}{3} - \frac{3}{6} & & \end{array}$$

تمرين 4

أحسب ما يلي ثم اختزل إذا كان ممكنا :

$$\begin{array}{lcl} \frac{7}{8} + \frac{2}{6} & \therefore & \frac{9}{5} + \frac{3}{2} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} 14 + \frac{7}{9} & \therefore & \frac{7,2}{2} + \frac{1}{2,5} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{12}{13} + \frac{3}{5} & \therefore & \frac{0,5}{7} + 1,2 \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{5}{3} + \frac{7}{11} & & \end{array}$$

$$\begin{array}{lcl} \frac{9,7}{11} - 0,5 & \therefore & \frac{15}{14} - \frac{1}{8} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{5,5}{2} - \frac{3}{2,5} & \therefore & \frac{40}{16} - \frac{5}{8} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{13}{15} - \frac{1}{9} & \therefore & \frac{11}{3} - \frac{3}{7} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{6}{9} - \frac{5}{11} & & \end{array}$$

تمرين 5

أحسب بأسهل طريقة ممكنة ثم اختزال إذا كان ممكنا :

$$\begin{array}{lcl} \frac{3}{5} + \frac{7}{10} + \frac{8}{2} + \frac{9}{5} + \frac{1}{5} + \frac{7}{2} + \frac{3}{10} & \therefore & \frac{3}{7} + \frac{5}{21} + \frac{6}{21} + \frac{4}{7} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{5}{16} + \frac{11}{4} + \frac{3}{16} + \frac{1}{4} & & \end{array}$$

تمرين 6

أتمم ما يلي :

$$\begin{array}{lcl} \frac{3}{6} + \dots = 1 & \therefore & \frac{11}{48} + \dots = \frac{17}{48} \\ \dots & & \dots \end{array} \begin{array}{lcl} \frac{7}{12} - \frac{8}{36} = \frac{13}{36} & \therefore & \frac{12}{9} - \dots = \frac{7}{9} \\ \dots & & \dots \end{array} \begin{array}{lcl} \frac{6}{7} + \dots = 1 & & \end{array}$$

أحسب ما يلي ثم اختزل إذا كان ممكنا :

$$\begin{array}{lcl} \frac{7}{2} \times \frac{2}{7} & \therefore & 11 \times \frac{1}{22} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{4}{22} \times 0,5 & \therefore & \frac{80}{7} \times 14,2 \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{24}{10} \times 310 & \therefore & \frac{1}{13} \times \frac{13}{2} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{12}{11} \times \frac{49}{6} & \therefore & \frac{11}{3} \times \frac{12}{9} \\ \therefore & & \therefore \end{array}$$

تمرين 7

أتمم ما يلي :

$$\begin{array}{lcl} 3,52 \times \dots = 1 & \therefore & 6,7 \times \dots = 1 \\ \dots & & \dots \end{array} \begin{array}{lcl} \frac{7}{12} \times \dots = 1 & \therefore & \frac{9}{10} \times \dots = 1 \\ \dots & & \dots \end{array} \begin{array}{lcl} \frac{125}{125} \times \frac{96}{125} = 1 & \therefore & \frac{7}{6} \times \frac{7}{7} = 1 \\ \dots & & \dots \end{array}$$

$$\begin{array}{lcl} 1,7 \times \dots = \frac{11}{4} & \therefore & \frac{8}{7} \times \dots = \frac{3}{4} \\ \dots & & \dots \end{array} \begin{array}{lcl} \frac{7}{3} \times \dots = \frac{1}{5} & \therefore & \frac{2}{3} \times \dots = \frac{6}{15} \\ \dots & & \dots \end{array} \begin{array}{lcl} \frac{7}{9} \times \dots = 1 & \therefore & \frac{33}{44} \times \frac{4}{4} = 1 \\ \dots & & \dots \end{array}$$

أحسب ما يلي ثم اختزل إذا كان ممكنا :

$$\begin{array}{lcl} \frac{21}{40} : \frac{56}{66} & \therefore & \frac{55}{12} : 0,6 \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{22}{14} : \frac{11}{7} & \therefore & \frac{34}{65} : 51 \\ \therefore & & \therefore \end{array} \begin{array}{lcl} 26 : \frac{3}{11} & \therefore & \frac{1}{12} : \frac{1}{26} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{16}{9} : \frac{8}{5} & & \end{array}$$

$$\begin{array}{lcl} \frac{25}{80} : 100 & \therefore & \frac{24}{30} : \frac{16}{15} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{1}{8} : 6,2 & \therefore & \frac{48}{46} : 40 \\ \therefore & & \therefore \end{array} \begin{array}{lcl} 12,6 : \frac{42}{25} & \therefore & \frac{8}{10} : \frac{10}{8} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{34}{21} : \frac{17}{21} & & \end{array}$$

إملاء الفراغ بالعدد المناسب :

$$\begin{array}{lcl} \frac{11}{25} \times \dots = 1 & \therefore & \dots \times \frac{83}{67} = \frac{1}{25} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \dots \times \frac{12}{28} = \frac{3}{7} & \therefore & \frac{40}{27} \times \dots = \frac{4}{54} \\ \therefore & & \therefore \end{array} \begin{array}{lcl} \frac{23}{13} \times \dots = \frac{5}{15} & & \end{array}$$

تمرين 10

أحسب ما يلي مع الاختزال إذا كان ممكنا

$$\frac{81}{27} \quad ; \quad \frac{66}{11} \quad ; \quad \frac{48}{18} \quad ; \quad \frac{36}{16} \quad ; \quad \frac{9}{7} \quad ; \quad \frac{8}{45} \quad ; \quad \frac{11}{40} \quad ; \quad \frac{7}{33} \quad ; \quad \frac{19}{9} \quad ; \quad \frac{18}{54} \quad ; \quad \frac{2}{3} \\ \frac{8}{8} \quad ; \quad \frac{11}{18} \quad ; \quad \frac{36}{16} \quad ; \quad \frac{7}{10} \quad ; \quad \frac{5}{45} \quad ; \quad \frac{14}{40} \quad ; \quad \frac{20}{33} \quad ; \quad \frac{6}{9} \quad ; \quad \frac{9}{81} \quad ; \quad \frac{11}{36} \quad ; \quad \frac{7}{44} \quad ; \quad \frac{3}{4}$$

أحسب ما يلي مع الاختزال إذا كان ممكنا :

$$A = \frac{5}{2} + \frac{1}{2} \times \frac{8}{11} - \frac{5}{4} \times \frac{9}{3} + \frac{7}{12} \times 1,5 \times \frac{15}{10}$$

أحسب ما يلي مع الاختزال إذا كان ممكنا :

$$1 + \frac{1}{2} \times \left(5 - \frac{3}{4} \right) \quad \left(1 + \frac{1}{2} \right) \times 5 - \frac{3}{4} \\ \left(\frac{2}{7} + \frac{5}{3} \right) \div \frac{10}{3} - \frac{4}{7} \quad ; \quad 4 - \frac{1}{9} \times 3 + \frac{1}{3}$$

أحسب ما يلي ثم اختزل إذا كان ممكنا :

$$N = \frac{\frac{4}{7} + \frac{11}{23}}{\frac{21}{23} + \frac{17}{25}} \quad ; \quad O = \frac{\frac{7}{12} + \frac{23}{4}}{\frac{5}{11} - \frac{3}{22}} \\ P = \frac{\frac{15}{18} - \frac{7}{36}}{\frac{17}{9} + \frac{3}{18}} \quad ; \quad Q = \frac{\frac{11}{45} - \frac{1}{9}}{\frac{16}{15} - \frac{3}{5}} \\ R = \frac{1}{2 + \frac{1}{3 + \frac{4}{5}}} \quad ; \quad S = \frac{3}{11 - \frac{5}{7 - \frac{6}{7}}}$$