

Opérations Mixtes (A)

Complétez les exercices suivants

$$\begin{array}{r} 17 \\ - 13 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ + 9 \\ \hline \end{array} \quad \begin{array}{r} 16 \\ - 10 \\ \hline \end{array} \quad \begin{array}{r} 10 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ + 2 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ + 3 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ \times 8 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ + 15 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ + 15 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 13 \\ \hline \end{array} \quad \begin{array}{r} 6 \\ \times 15 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ + 11 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ \times 12 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 2 \\ \times 3 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ \times 10 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ \times 15 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ + 14 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \\ - 14 \\ \hline \end{array} \quad \begin{array}{r} 6 \\ + 11 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ + 9 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ \times 6 \\ \hline \end{array} \quad \begin{array}{r} 21 \\ - 13 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ \times 12 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ \times 11 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ \times 13 \\ \hline \end{array} \quad \begin{array}{r} 19 \\ - 10 \\ \hline \end{array} \quad \begin{array}{r} 1 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ - 10 \\ \hline \end{array} \quad \begin{array}{r} 3 \\ + 5 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ \times 1 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ + 7 \\ \hline \end{array} \quad \begin{array}{r} 21 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ \times 1 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ + 5 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ + 11 \\ \hline \end{array} \quad \begin{array}{r} 6 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 6 \\ + 10 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ \times 6 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ + 8 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ - 10 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ + 5 \\ \hline \end{array} \quad \begin{array}{r} 3 \\ + 7 \\ \hline \end{array} \quad \begin{array}{r} 18 \\ - 10 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 16 \\ - 12 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ \times 1 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ \times 1 \\ \hline \end{array} \quad \begin{array}{r} 3 \\ \times 12 \\ \hline \end{array} \quad \begin{array}{r} 23 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 22 \\ - 12 \\ \hline \end{array} \quad \begin{array}{r} 19 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 10 \\ + 2 \\ \hline \end{array} \quad \begin{array}{r} 19 \\ - 11 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ \times 8 \\ \hline \end{array} \quad \begin{array}{r} 5 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ + 4 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ + 8 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ + 8 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ + 11 \\ \hline \end{array} \quad \begin{array}{r} 5 \\ + 2 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ \times 10 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ \times 9 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 29 \\ - 15 \\ \hline \end{array} \quad \begin{array}{r} 10 \\ \times 5 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 1 \\ + 9 \\ \hline \end{array} \quad \begin{array}{r} 19 \\ - 13 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ \times 15 \\ \hline \end{array} \quad \begin{array}{r} 18 \\ - 12 \\ \hline \end{array} \quad \begin{array}{r} 16 \\ - 15 \\ \hline \end{array} \quad \begin{array}{r} 27 \\ - 14 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ \times 9 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ \times 15 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ + 4 \\ \hline \end{array} \quad \begin{array}{r} 21 \\ - 15 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ + 8 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ + 2 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ \times 4 \\ \hline \end{array} \quad \begin{array}{r} 10 \\ \times 13 \\ \hline \end{array} \quad \begin{array}{r} 28 \\ - 14 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ + 13 \\ \hline \end{array} \quad \begin{array}{r} 10 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 2 \\ \times 15 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ + 1 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 1 \\ \hline \end{array} \quad \begin{array}{r} 21 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 16 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ + 13 \\ \hline \end{array}$$

Opérations Mixtes Solutions (A)

Complétez les exercices suivants

$$\begin{array}{r}
 - & 17 & + & 14 & - & 16 & - & 10 & - & 4 & + & 11 & + & 7 & \times & 13 & + & 8 & + & 12 & + & 8 \\
 - & 13 & + & 9 & - & 10 & - & 6 & - & 6 & + & 2 & + & 3 & \frac{8}{10} & \frac{13}{104} & + & 15 & + & 15 & + & 5 \\
 \hline
 & 4 & & 23 & & 6 & & 6 & & 13 & & 10 & & 10 & & 23 & & 27 & & 13
 \end{array}$$

$$\begin{array}{r}
 \times & 10 & \times & 6 & - & 8 & + & 7 & \times & 13 & - & 11 & \times & 2 & \times & 11 & \times & 11 & + & 13 \\
 \times & 13 & \times & 15 & - & 4 & + & 11 & \times & 12 & - & 8 & \times & 3 & \times & 10 & \times & 15 & + & 14 \\
 \hline
 & 130 & & 90 & & 4 & & 18 & & 156 & & 3 & & 6 & & 110 & & 165 & & 27
 \end{array}$$

$$\begin{array}{r}
 - & 19 & + & 6 & + & 8 & \times & 7 & - & 21 & \times & 7 & \times & 7 & \times & 4 & - & 19 & + & 1 \\
 - & 14 & + & 11 & + & 9 & \times & 6 & - & 13 & \times & 12 & \times & 11 & \times & 13 & - & 10 & + & 3 \\
 \hline
 & 5 & & 17 & & 17 & & 42 & & 8 & & 84 & & 77 & & 52 & & 9 & & 4
 \end{array}$$

$$\begin{array}{r}
 \times & 5 & - & 12 & + & 3 & - & 11 & \times & 4 & + & 8 & - & 21 & \times & 14 & + & 12 & + & 14 \\
 \times & 7 & - & 10 & + & 5 & - & 6 & \times & 1 & + & 7 & - & 8 & \times & 1 & + & 5 & \times & 7 \\
 \hline
 & 35 & & 2 & & 8 & & 5 & & 4 & & 15 & & 13 & & 14 & & 17 & & 98
 \end{array}$$

$$\begin{array}{r}
 + & 10 & - & 6 & + & 6 & \times & 11 & + & 15 & - & 14 & + & 15 & + & 3 & - & 18 & + & 11 \\
 + & 11 & - & 4 & + & 10 & \times & 6 & + & 8 & - & 10 & + & 5 & + & 7 & - & 10 & \times & 5 \\
 \hline
 & 21 & & 2 & & 16 & & 66 & & 23 & & 4 & & 20 & & 10 & & 8 & & 55
 \end{array}$$

$$\begin{array}{r}
 - & 8 & - & 16 & \times & 15 & \times & 13 & \times & 3 & - & 23 & \frac{22}{-12} & \frac{19}{-5} & \frac{10}{+2} & \frac{19}{-11} \\
 - & 6 & - & 12 & \times & 1 & \times & 1 & \times & 12 & - & 8 & - & 15 & - & 10 & & 12 & & 8
 \end{array}$$

$$\begin{array}{r}
 \times & 1 & - & 5 & + & 4 & + & 11 & + & 7 & + & 13 & + & 5 & \times & 8 & \times & 13 & + & 9 \\
 \times & 8 & - & 3 & + & 4 & + & 8 & + & 8 & + & 11 & + & 2 & \times & 10 & \times & 9 & + & 6 \\
 \hline
 & 8 & & 2 & & 8 & & 19 & & 15 & & 24 & & 7 & & 80 & & 117 & & 15
 \end{array}$$

$$\begin{array}{r}
 - & 13 & - & 29 & \times & 10 & - & 11 & + & 1 & - & 19 & \times & 15 & - & 18 & - & 16 & - & 27 \\
 - & 6 & - & 15 & \times & 5 & - & 8 & + & 9 & - & 13 & \times & 15 & - & 12 & - & 15 & - & 14 \\
 \hline
 & 7 & & 14 & & 50 & & 3 & & 10 & & 6 & & 225 & & 6 & & 1 & & 13
 \end{array}$$

$$\begin{array}{r}
 \times & 14 & \times & 12 & + & 14 & - & 21 & + & 12 & + & 13 & \times & 4 & \times & 10 & - & 28 & + & 12 \\
 \times & 9 & \times & 15 & + & 4 & - & 15 & + & 8 & + & 2 & \times & 4 & \times & 13 & - & 14 & \times & 12 \\
 \hline
 & 126 & & 180 & & 18 & & 6 & & 20 & & 15 & & 16 & & 130 & & 14 & & 144
 \end{array}$$

$$\begin{array}{r}
 + & 11 & - & 10 & - & 12 & \times & 2 & + & 7 & - & 9 & - & 1 & - & 7 & - & 21 & - & 16 & + & 8 \\
 + & 13 & - & 9 & - & 9 & \times & 15 & + & 1 & - & 9 & - & 2 & - & 1 & - & 6 & - & 9 & + & 13 \\
 \hline
 & 24 & & 1 & & 3 & & 30 & & 8 & & 2 & & 7 & & 15 & & 7 & & 21
 \end{array}$$

Opérations Mixtes (B)

Complétez les exercices suivants

$$\begin{array}{r}
 + 3 & - 23 & + 13 & \times 2 & + 15 & \times 7 & + 8 & - 15 & \times 13 & \times 4 \\
 \underline{+ 10} & \underline{- 13} & \underline{+ 15} & \times 5 & \underline{+ 12} & \underline{\times 3} & \underline{+ 14} & \underline{- 1} & \underline{\times 3} & \underline{\times 13}
 \end{array}$$

$$-\frac{16}{14} \quad -\frac{18}{5} \quad -\frac{12}{8} \quad \times \frac{3}{15} \quad + \frac{13}{13} \quad -\frac{10}{7} \quad \times \frac{3}{12} \quad \times \frac{5}{15} \quad \times \frac{9}{15} \quad -\frac{21}{15}$$

$$\begin{array}{ccccccccccccc} \times & 6 & - & 21 & \times & 11 & \times & 9 & \times & 3 & \times & 7 & - & 24 & - & 20 & \times & 1 & - & 16 \\ \times & 3 & - & 12 & \times & 4 & \times & 12 & \times & 15 & \times & 6 & - & 10 & - & 10 & \times & 6 & - & 5 \end{array}$$

$$+ \frac{1}{13} \times \frac{6}{2} - \frac{23}{13} \times \frac{14}{4} - \frac{25}{13} \times \frac{14}{12} \times \frac{10}{7} \times \frac{4}{6} + \frac{2}{10} + \frac{9}{14}$$

$$-\frac{20}{14} - \frac{24}{12} - \frac{18}{5} - \frac{21}{8} \times \frac{13}{9} + \frac{7}{15} + \frac{2}{9} \times \frac{13}{1} \times \frac{6}{11} \times \frac{13}{1}$$

$$= \frac{19}{5} + \frac{12}{15} - \frac{3}{1} + \frac{9}{8} + \frac{8}{3} + \frac{13}{6} - \frac{22}{11} + \frac{9}{13} - \frac{16}{11} \times \frac{15}{13}$$

$$\times \quad 8 \quad \times \quad 1 \quad \times \quad 4 \quad + \quad 7 \quad + \quad 10 \quad - \quad 3 \quad \times \quad 13 \quad + \quad 1 \quad - \quad 28 \quad + \quad 9$$

$$\times \quad 8 \quad \times \quad 6 \quad \times \quad 11 \quad + \quad 8 \quad + \quad 11 \quad - \quad 1 \quad \times \quad 12 \quad + \quad 12 \quad - \quad 14 \quad + \quad 1$$

$$+ \frac{2}{6} \times \frac{4}{6} = \frac{20}{36} \times \frac{5}{4} \times \frac{13}{2} + \frac{14}{7} + \frac{9}{13} \times \frac{2}{7} + \frac{12}{9} = \frac{20}{11}$$

$$-\frac{20}{11} \times \frac{1}{4} \times \frac{8}{14} - \frac{19}{14} \times \frac{6}{11} \times \frac{14}{11} \times \frac{8}{9} \times \frac{12}{1} + \frac{1}{8} = \frac{26}{11}$$

$$\times \frac{2}{13} \quad \times \frac{11}{6} \quad \times \frac{7}{14} \quad \times \frac{8}{8} \quad + \frac{11}{14} \quad + \frac{2}{2} \quad \times \frac{1}{3} \quad - \frac{21}{15} \quad \times \frac{2}{8} \quad + \frac{3}{10}$$

Opérations Mixtes Solutions (B)

Complétez les exercices suivants

$$\begin{array}{r}
 3 & 23 & 13 & 2 & 15 & 7 & 8 & 15 & 13 & 4 \\
 + 10 & - 13 & + 15 & \times 5 & + 12 & \times 3 & + 14 & - 1 & \times 3 & \times 13 \\
 \hline
 13 & 10 & 28 & 10 & 27 & 21 & 22 & 14 & 39 & 52
 \end{array}$$

$$\begin{array}{r}
 16 & 18 & 12 & 3 & 13 & 10 & 3 & 5 & 9 & 21 \\
 - 14 & - 5 & - 8 & \times 15 & + 13 & - 7 & \times 12 & \times 15 & \times 15 & - 15 \\
 \hline
 2 & 13 & 4 & 45 & 26 & 3 & 36 & 75 & 135 & 6
 \end{array}$$

$$\begin{array}{r}
 6 & 21 & 11 & 9 & 3 & 7 & 24 & 20 & 1 & 16 \\
 \times 3 & - 12 & \times 4 & \times 12 & \times 15 & \times 6 & - 10 & - 10 & \times 6 & - 5 \\
 \hline
 18 & 9 & 44 & 108 & 45 & 42 & 14 & 10 & 6 & 11
 \end{array}$$

$$\begin{array}{r}
 1 & 6 & 23 & 14 & 25 & 14 & 10 & 4 & 2 & 9 \\
 + 13 & \times 2 & - 13 & \times 4 & - 13 & \times 12 & \times 7 & \times 6 & + 10 & + 14 \\
 \hline
 14 & 12 & 10 & 56 & 12 & 168 & 70 & 24 & 12 & 23
 \end{array}$$

$$\begin{array}{r}
 20 & 24 & 18 & 21 & 13 & 7 & 2 & 13 & 6 & 13 \\
 - 14 & - 12 & - 5 & - 8 & \times 9 & + 15 & + 9 & \times 1 & \times 11 & \times 1 \\
 \hline
 6 & 12 & 13 & 13 & 117 & 22 & 11 & 13 & 66 & 13
 \end{array}$$

$$\begin{array}{r}
 19 & 12 & 3 & 9 & 8 & 13 & 22 & 9 & 16 & 15 \\
 - 5 & + 15 & - 1 & + 8 & + 3 & + 6 & - 11 & + 13 & - 11 & \times 13 \\
 \hline
 14 & 27 & 2 & 17 & 11 & 19 & 11 & 22 & 5 & 195
 \end{array}$$

$$\begin{array}{r}
 8 & 1 & 4 & 7 & 10 & 3 & 13 & 1 & 28 & 9 \\
 \times 8 & \times 6 & \times 11 & + 8 & + 11 & - 1 & \times 12 & + 12 & - 14 & + 1 \\
 \hline
 64 & 6 & 44 & 15 & 21 & 2 & 156 & 13 & 14 & 10
 \end{array}$$

$$\begin{array}{r}
 2 & 4 & 20 & 5 & 13 & 14 & 9 & 2 & 12 & 20 \\
 + 6 & \times 6 & - 5 & \times 4 & \times 2 & + 7 & + 13 & \times 7 & + 9 & - 11 \\
 \hline
 8 & 24 & 15 & 20 & 26 & 21 & 22 & 14 & 21 & 9
 \end{array}$$

$$\begin{array}{r}
 20 & 1 & 8 & 19 & 6 & 14 & 8 & 12 & 1 & 26 \\
 - 11 & \times 4 & \times 14 & - 14 & \times 11 & \times 11 & \times 9 & \times 1 & + 8 & - 11 \\
 \hline
 9 & 4 & 112 & 5 & 66 & 154 & 72 & 12 & 9 & 15
 \end{array}$$

$$\begin{array}{r}
 2 & 11 & 7 & 8 & 11 & 2 & 1 & 21 & 2 & 3 \\
 \times 13 & \times 6 & \times 14 & \times 8 & + 14 & + 2 & \times 3 & - 15 & \times 8 & + 10 \\
 \hline
 26 & 66 & 98 & 64 & 25 & 4 & 3 & 6 & 16 & 13
 \end{array}$$

Opérations Mixtes (C)

Complétez les exercices suivants

$$\begin{array}{r} 7 \\ + 11 \\ \hline - 11 \\ - 10 \\ \hline \times 12 \\ + 10 \\ + 13 \\ \hline \times 1 \\ - 12 \\ - 6 \\ \hline - 4 \end{array}$$

$$\begin{array}{r}
 -20 \\
 -15 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 +5 \\
 +6 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 +14 \\
 +12 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 \times 1 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 +12 \\
 +2 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 -24 \\
 -14 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 -12 \\
 -3 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 +2 \\
 +13 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 +3 \\
 +5 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 +12 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 -\frac{11}{10} \quad -\frac{17}{15} \quad \times \frac{14}{9} \quad \times \frac{10}{14} \quad + \frac{8}{13} \quad -\frac{23}{12} \quad + \frac{6}{7} \quad + \frac{4}{14} \quad + \frac{3}{7} \quad \times \frac{14}{13}
 \end{array}$$

$$\begin{array}{r}
 + \frac{11}{9} \\
 - \frac{17}{11} \\
 + \frac{14}{4} \\
 \times \frac{10}{13} \\
 + \frac{6}{4} \\
 \times \frac{7}{14} \\
 - \frac{26}{12} \\
 \times \frac{6}{6} \\
 \times \frac{6}{11} \\
 - \frac{10}{9}
 \end{array}$$

$$\begin{array}{r}
 -15 \\
 -1 \\
 \hline
 +10 \\
 \hline
 +6 \\
 \hline
 +3 \\
 \hline
 +2 \\
 \hline
 +6 \\
 \hline
 \times 8 \\
 \hline
 +13 \\
 \hline
 \times 10 \\
 \hline
 +6
 \end{array}$$

$$\begin{array}{r}
 4 & 4 & -15 & 8 & 5 & -9 & -9 & -11 & 13 & 12 \\
 \times 4 & \times 1 & -14 & + 4 & + 6 & - 1 & - 2 & - 4 & + 15 & \times 13 \\
 \hline
\end{array}$$

$$\begin{array}{r}
 4 & \times & 5 & - & 21 & \times & 8 & + & 14 & \times & 15 & - & 27 & \times & 2 & \times & 14 & + & 11 \\
 + 11 & \times 10 & - 14 & \times 10 & + 1 & \times 15 & - 14 & \times 4 & \times 1 & + 7
 \end{array}$$

$$\begin{array}{r}
 4 & -16 & -16 & -10 & -23 & -18 & \times 1 & -20 & \times 11 & \times 5 \\
 + 15 & - 12 & - 1 & - 6 & - 10 & - 4 & \times 1 & - 13 & \times 7 & \times 15 \\
 \hline
\end{array}$$

$$\begin{array}{r}
 1 & 13 & 4 & 4 & 8 & 9 & 8 & 11 & 4 & 10 \\
 + 3 & \times 8 & + 15 & \times 8 & - 5 & \times 15 & - 1 & + 6 & + 13 & + 13
 \end{array}$$

Opérations Mixtes Solutions (C)

Complétez les exercices suivants

$$\begin{array}{r}
 7 & -18 & 23 & 12 & 15 & 2 & 14 & 23 & 13 & 9 \\
 +11 & -11 & -10 & \times 12 & +10 & +13 & \times 1 & -12 & -6 & -4 \\
 \hline
 18 & 7 & 13 & 144 & 25 & 15 & 14 & 11 & 7 & 5
 \end{array}$$

$$\begin{array}{r}
 20 & 5 & 14 & 4 & 12 & 24 & 12 & 2 & 3 & 12 \\
 -15 & +6 & +12 & \times 1 & +2 & -14 & -3 & +13 & +5 & +12 \\
 \hline
 5 & 11 & 26 & 4 & 14 & 10 & 9 & 15 & 8 & 24
 \end{array}$$

$$\begin{array}{r}
 11 & 17 & 14 & 10 & 8 & 23 & 6 & 4 & 3 & 14 \\
 -10 & -15 & \times 9 & \times 14 & +13 & -12 & +7 & +14 & +7 & \times 13 \\
 \hline
 1 & 2 & 126 & 140 & 21 & 11 & 13 & 18 & 10 & 182
 \end{array}$$

$$\begin{array}{r}
 11 & 17 & 14 & 10 & 6 & 7 & 26 & 6 & 6 & 10 \\
 +9 & -11 & +4 & \times 13 & +4 & \times 14 & -12 & \times 6 & \times 11 & -9 \\
 \hline
 20 & 6 & 18 & 130 & 10 & 98 & 14 & 36 & 66 & 1
 \end{array}$$

$$\begin{array}{r}
 8 & 17 & 4 & 18 & 5 & 14 & 5 & 1 & 17 & 6 \\
 \times 15 & -4 & -1 & -12 & +1 & -5 & +1 & +11 & -8 & +1 \\
 \hline
 120 & 13 & 3 & 6 & 6 & 9 & 6 & 12 & 9 & 7
 \end{array}$$

$$\begin{array}{r}
 15 & 15 & 12 & 11 & 8 & 5 & 4 & 14 & 3 & 12 \\
 -1 & +10 & +6 & +3 & +2 & +6 & \times 8 & +13 & \times 10 & +6 \\
 \hline
 14 & 25 & 18 & 14 & 10 & 11 & 32 & 27 & 30 & 18
 \end{array}$$

$$\begin{array}{r}
 4 & 4 & 15 & 8 & 5 & 9 & 9 & 11 & 13 & 12 \\
 \times 4 & \times 1 & -14 & +4 & +6 & -1 & -2 & -4 & +15 & \times 13 \\
 \hline
 16 & 4 & 1 & 12 & 11 & 8 & 7 & 7 & 28 & 156
 \end{array}$$

$$\begin{array}{r}
 4 & 5 & 21 & 8 & 14 & 12 & 27 & 2 & 14 & 11 \\
 +11 & \times 10 & -14 & \times 10 & +1 & \times 15 & -14 & \times 4 & \times 1 & +7 \\
 \hline
 15 & 50 & 7 & 80 & 15 & 180 & 13 & 8 & 14 & 18
 \end{array}$$

$$\begin{array}{r}
 4 & 16 & 16 & 10 & 23 & 18 & 5 & 20 & 11 & 5 \\
 +15 & -12 & -1 & -6 & -10 & -4 & \times 1 & -13 & \times 7 & \times 15 \\
 \hline
 19 & 4 & 15 & 4 & 13 & 14 & 5 & 7 & 77 & 75
 \end{array}$$

$$\begin{array}{r}
 1 & 13 & 4 & 4 & 8 & 9 & 8 & 11 & 4 & 10 \\
 +3 & \times 8 & +15 & \times 8 & -5 & \times 15 & -1 & +6 & +13 & +13 \\
 \hline
 4 & 104 & 19 & 32 & 3 & 135 & 7 & 17 & 17 & 23
 \end{array}$$

Opérations Mixtes (D)

Complétez les exercices suivants

$$\begin{array}{r}
 + \quad 6 & + \quad 5 & + \quad 10 & + \quad 15 & \times \quad 8 & + \quad 2 & - \quad 21 & \times \quad 9 & \times \quad 13 & - \quad 6 \\
 \hline
 7 & 13 & 12 & 4 & 5 & 10 & 10 & 12 & 3 & 4
 \end{array}$$

$$\begin{array}{r} \times \quad 11 \\ \quad 7 \\ \hline - \quad 3 \end{array} \quad \begin{array}{r} + \quad 4 \\ + \quad 3 \\ \hline \times \quad 9 \end{array} \quad \begin{array}{r} \times \quad 3 \\ \times 15 \\ \hline - \quad 5 \end{array} \quad \begin{array}{r} + \quad 2 \\ + 15 \\ \hline + \quad 6 \end{array}$$

$$-\frac{19}{14} + \frac{1}{13} - \frac{16}{7} - \frac{16}{13} - \frac{18}{7} + \frac{10}{4} \times \frac{14}{5} + \frac{15}{11} + \frac{7}{3} - \frac{18}{5}$$

$$+ \frac{11}{10} + \frac{7}{3} \times \frac{13}{11} \times \frac{9}{2} + \frac{5}{5} - \frac{11}{6} + \frac{1}{14} + \frac{7}{3} \times \frac{8}{15} \times \frac{14}{6}$$

$$+ \frac{3}{+ 3} - \frac{15}{1} \times \frac{1}{11} + \frac{6}{14} + \frac{10}{15} + \frac{3}{4} - \frac{14}{2} \times \frac{1}{3} \times \frac{6}{10} + \frac{2}{4}$$

$$\begin{array}{r} \times 13 \\ \times 7 \\ + 15 \\ \hline - 2 \end{array} \quad \begin{array}{r} \times 6 \\ \times 1 \\ \times 9 \\ \hline + 5 \end{array} \quad \begin{array}{r} \times 5 \\ \times 14 \\ \hline + 5 \end{array} \quad \begin{array}{r} \times 12 \\ \times 14 \\ \hline \times 6 \end{array}$$

$$\begin{array}{r} \times 11 \\ \times 10 \end{array} \quad \begin{array}{r} \times 9 \\ \times 11 \end{array} \quad \begin{array}{r} + 15 \\ + 13 \end{array} \quad \begin{array}{r} + 10 \\ + 7 \end{array} \quad \begin{array}{r} + 13 \\ + 4 \end{array} \quad \begin{array}{r} + 2 \\ + 4 \end{array} \quad \begin{array}{r} + 15 \\ + 3 \end{array} \quad \begin{array}{r} - 14 \\ - 4 \end{array} \quad \begin{array}{r} - 22 \\ - 13 \end{array} \quad \begin{array}{r} + 3 \\ + 5 \end{array}$$

$$\times \begin{array}{r} 5 \\ 12 \end{array} + \begin{array}{r} 6 \\ 5 \end{array} = \begin{array}{r} 15 \\ 7 \end{array} + \begin{array}{r} 8 \\ 6 \end{array} = \begin{array}{r} 7 \\ 4 \end{array} + \begin{array}{r} 15 \\ 13 \end{array} \times \begin{array}{r} 2 \\ 1 \end{array} + \begin{array}{r} 10 \\ 12 \end{array} + \begin{array}{r} 4 \\ 15 \end{array} = \begin{array}{r} 23 \\ 8 \end{array}$$

$$= \frac{24}{-11} + \frac{8}{14} - \frac{16}{-14} - \frac{16}{12} + \frac{11}{13} + \frac{8}{4} - \frac{18}{4} + \frac{12}{15} - \frac{18}{4} \times \frac{15}{13}$$

$$= \frac{14}{10} \times \frac{8}{13} = \frac{17}{7} + \frac{13}{13} = \frac{12}{8} + \frac{12}{9} \times \frac{14}{4} \times \frac{10}{3} + \frac{2}{6} \times \frac{6}{13}$$

Opérations Mixtes Solutions (D)

Complétez les exercices suivants

$$\begin{array}{r}
 + & 6 & 5 & 10 & 15 & 8 & 2 & 21 & 9 & 13 & 6 \\
 \hline
 7 & + 13 & + 12 & + 4 & \times 5 & + 10 & - 10 & \times 12 & \times 3 & - 4 \\
 \hline
 13 & 18 & 22 & 19 & 40 & 12 & 11 & 108 & 39 & 2
 \end{array}$$

$$\begin{array}{r}
 \times & 11 & 11 & 4 & 10 & 3 & 9 & 16 & 15 & 2 & 3 \\
 7 & - 3 & + 2 & + 3 & \times 9 & \times 15 & - 5 & - 4 & + 15 & + 6 \\
 \hline
 77 & 8 & 6 & 13 & 27 & 135 & 11 & 11 & 17 & 9
 \end{array}$$

$$\begin{array}{r}
 - & 19 & 1 & 16 & 16 & 18 & 10 & 14 & 15 & 7 & 18 \\
 14 & + 13 & - 7 & - 13 & - 7 & + 4 & \times 5 & + 11 & + 3 & - 5 \\
 \hline
 5 & 14 & 9 & 3 & 11 & 14 & 70 & 26 & 10 & 13
 \end{array}$$

$$\begin{array}{r}
 + & 11 & 7 & 13 & 9 & 5 & 11 & 1 & 7 & 8 & 14 \\
 10 & + 3 & \times 11 & \times 2 & + 5 & - 6 & + 14 & + 3 & \times 15 & \times 6 \\
 \hline
 21 & 10 & 143 & 18 & 10 & 5 & 15 & 10 & 120 & 84
 \end{array}$$

$$\begin{array}{r}
 + & 3 & 15 & 1 & 6 & 10 & 3 & 14 & 1 & 6 & 2 \\
 3 & - 1 & \times 11 & + 14 & + 15 & + 4 & - 2 & \times 3 & \times 10 & + 4 \\
 \hline
 6 & 14 & 11 & 20 & 25 & 7 & 12 & 3 & 60 & 6
 \end{array}$$

$$\begin{array}{r}
 \times & 13 & 7 & 15 & 4 & 6 & 5 & 5 & 5 & 12 & 6 \\
 1 & \times 3 & + 8 & - 2 & \times 1 & \times 9 & + 5 & \times 14 & \times 14 & \times 7 \\
 \hline
 13 & 21 & 23 & 2 & 6 & 45 & 10 & 70 & 168 & 42
 \end{array}$$

$$\begin{array}{r}
 \times & 11 & 9 & 15 & 10 & 13 & 2 & 15 & 14 & 22 & 3 \\
 10 & \times 11 & + 13 & + 7 & + 4 & + 4 & + 3 & - 4 & - 13 & + 5 \\
 \hline
 110 & 99 & 28 & 17 & 17 & 6 & 18 & 10 & 9 & 8
 \end{array}$$

$$\begin{array}{r}
 \times & 5 & 6 & 15 & 8 & 7 & 15 & 2 & 10 & 4 & 23 \\
 12 & + 5 & - 7 & + 6 & - 4 & + 13 & \times 1 & + 12 & + 15 & - 8 \\
 \hline
 60 & 11 & 8 & 14 & 3 & 28 & 2 & 22 & 19 & 15
 \end{array}$$

$$\begin{array}{r}
 - & 24 & 8 & 16 & 16 & 11 & 8 & 18 & 12 & 18 & 15 \\
 11 & + 14 & - 14 & - 12 & + 13 & + 4 & - 4 & + 15 & - 4 & \times 13 \\
 \hline
 13 & 22 & 2 & 4 & 24 & 12 & 14 & 27 & 14 & 195
 \end{array}$$

$$\begin{array}{r}
 - & 14 & 8 & 17 & 13 & 12 & 12 & 14 & 10 & 2 & 6 \\
 10 & \times 13 & - 7 & + 13 & - 8 & + 9 & \times 4 & \times 3 & + 6 & \times 13 \\
 \hline
 4 & 104 & 10 & 26 & 4 & 21 & 56 & 30 & 8 & 78
 \end{array}$$

Opérations Mixtes (E)

Complétez les exercices suivants

$$\begin{array}{r} - \\ \underline{11} & + \\ \underline{1} & \underline{15} & + \\ & \underline{9} & \times \\ & \underline{1} & \underline{11} & + \\ & & \underline{6} & \underline{6} & + \\ & & & \underline{2} & \underline{4} & + \\ & & & & \underline{2} & \underline{15} & - \\ & & & & & \underline{14} & \times \\ & & & & & & \underline{13} \end{array}$$

$$\begin{array}{r} \times \\ \underline{3} & + \\ \underline{6} & \underline{8} & - \\ & \underline{10} & \underline{2} & - \\ & & \underline{1} & \underline{1} & + \\ & & & \underline{7} & \underline{10} & \times \\ & & & & \underline{11} & \underline{3} & + \\ & & & & & \underline{8} & \underline{5} & + \\ & & & & & & \underline{6} & \times \\ & & & & & & & \underline{14} \end{array}$$

$$\begin{array}{r} + \\ \underline{15} & + \\ \underline{14} & \underline{2} & \times \\ & \underline{15} & \times \\ & & \underline{5} & \underline{10} & \times \\ & & & \underline{2} & \underline{13} & \underline{13} & - \\ & & & & \underline{7} & \underline{7} & \times \\ & & & & & \underline{1} & \underline{18} & - \\ & & & & & & \underline{15} & \underline{2} & + \\ & & & & & & & \underline{11} & \times \\ & & & & & & & & \underline{15} \end{array}$$

$$\begin{array}{r} \times \\ \underline{3} & + \\ \underline{15} & \underline{13} & + \\ & \underline{7} & \underline{5} & - \\ & & \underline{12} & \underline{25} & \underline{13} & \underline{21} & \underline{4} & \underline{24} & \underline{6} & \underline{7} \\ & & & & \underline{10} & \underline{10} & \underline{4} & \underline{9} & \underline{6} & \underline{11} \\ & & & & & & + & - & + & + \\ & & & & & & \underline{4} & \underline{9} & \underline{6} & \underline{11} \end{array}$$

$$\begin{array}{r} - \\ \underline{13} & + \\ \underline{11} & \underline{2} & + \\ & \underline{1} & \underline{2} & - \\ & & \underline{5} & \underline{17} & \underline{28} & \underline{15} & \underline{10} & \underline{10} & \underline{9} & \underline{19} \\ & & & & \underline{15} & \underline{3} & \underline{15} & \times & \underline{2} & - \\ & & & & & \underline{3} & \underline{15} & \underline{4} & \underline{2} & \underline{7} \end{array}$$

$$\begin{array}{r} - \\ \underline{25} & + \\ \underline{13} & \underline{6} & + \\ & \underline{14} & \underline{14} & + \\ & & \underline{14} & \underline{14} & \times \\ & & & \underline{8} & \underline{13} & \underline{1} & \underline{12} & \underline{12} & \underline{18} & \underline{7} \\ & & & & & \underline{12} & \underline{5} & \times & \underline{12} & - \\ & & & & & & \underline{5} & \underline{12} & \underline{7} & \underline{7} \end{array}$$

$$\begin{array}{r} \times \\ \underline{13} & + \\ \underline{10} & \underline{14} & \times \\ & \underline{2} & \times \\ & & \underline{1} & \underline{9} & \underline{7} & \underline{18} & \underline{13} & \underline{15} & \underline{8} & \underline{12} & \underline{6} \\ & & & & \underline{14} & \underline{14} & \underline{15} & \times & \underline{11} & \times & \underline{2} & \times \\ & & & & & & \underline{15} & \underline{15} & \underline{11} & \underline{2} & & \underline{1} \end{array}$$

$$\begin{array}{r} \times \\ \underline{3} & + \\ \underline{9} & \underline{12} & + \\ & \underline{5} & \underline{1} & + \\ & & \underline{4} & \underline{4} & \underline{15} & \underline{15} & \underline{8} & \underline{8} & \underline{3} & \underline{18} \\ & & & & \underline{7} & \underline{7} & \times & \underline{3} & \underline{3} & - \\ & & & & & & \underline{3} & \underline{5} & \underline{3} & \underline{9} \end{array}$$

$$\begin{array}{r} \times \\ \underline{8} & - \\ \underline{5} & \underline{1} & + \\ & \underline{10} & \underline{2} & \times \\ & & \underline{2} & \underline{6} & \underline{5} & \underline{5} & \underline{7} & \underline{9} & \underline{7} & \underline{15} \\ & & & & \underline{4} & \underline{4} & \times & \underline{6} & \underline{15} & + \\ & & & & & & \underline{6} & \underline{15} & \underline{1} & \underline{11} \end{array}$$

$$\begin{array}{r} \times \\ \underline{10} & + \\ \underline{6} & \underline{7} & - \\ & \underline{10} & \underline{18} & \times \\ & & \underline{3} & \underline{13} & \underline{14} & \underline{15} & \underline{12} & \underline{7} & \underline{15} & \underline{4} \\ & & & & \underline{3} & \underline{11} & \underline{3} & \underline{11} & \underline{5} & \times \\ & & & & & & \underline{3} & \underline{11} & \underline{5} & \underline{13} \end{array}$$

Opérations Mixtes Solutions (E)

Complétez les exercices suivants

$$\begin{array}{r}
 -\frac{11}{10} & +\frac{3}{15} & +\frac{5}{9} & \times\frac{15}{1} & +\frac{6}{11} & +\frac{3}{6} & +\frac{4}{2} & +\frac{15}{2} & -\frac{25}{14} & \times\frac{11}{13} \\
 \hline
 & 18 & 14 & 15 & 17 & 9 & 6 & 17 & 11 & 143
 \end{array}$$

$$\begin{array}{r}
 \times\frac{3}{6} & +\frac{11}{8} & -\frac{22}{10} & -\frac{16}{2} & -\frac{2}{1} & +\frac{10}{7} & \times\frac{3}{11} & +\frac{3}{8} & +\frac{5}{6} & \times\frac{15}{14} \\
 \hline
 & 19 & 12 & 14 & 1 & 17 & 33 & 11 & 11 & 210
 \end{array}$$

$$\begin{array}{r}
 +\frac{15}{14} & +\frac{14}{2} & \times\frac{11}{15} & \times\frac{10}{5} & \times\frac{13}{2} & -\frac{13}{7} & \times\frac{7}{1} & -\frac{18}{15} & +\frac{2}{11} & \times\frac{11}{15} \\
 \hline
 & 29 & 16 & 165 & 50 & 26 & 6 & 7 & 13 & 165
 \end{array}$$

$$\begin{array}{r}
 \times\frac{3}{15} & +\frac{10}{13} & +\frac{5}{7} & -\frac{25}{12} & -\frac{13}{10} & -\frac{21}{10} & +\frac{4}{4} & -\frac{24}{9} & +\frac{6}{6} & +\frac{7}{11} \\
 \hline
 & 45 & 23 & 12 & 13 & 3 & 11 & 8 & 12 & 18
 \end{array}$$

$$\begin{array}{r}
 -\frac{13}{11} & +\frac{10}{2} & +\frac{2}{1} & -\frac{17}{5} & -\frac{28}{15} & -\frac{15}{3} & +\frac{10}{15} & \times\frac{10}{4} & \times\frac{9}{2} & -\frac{19}{7} \\
 \hline
 & 2 & 12 & 3 & 12 & 13 & 12 & 25 & 18 & 12
 \end{array}$$

$$\begin{array}{r}
 -\frac{25}{13} & +\frac{4}{6} & +\frac{3}{14} & +\frac{14}{14} & \times\frac{14}{8} & +\frac{1}{12} & \times\frac{12}{5} & \times\frac{12}{12} & -\frac{18}{8} & \times\frac{7}{7} \\
 \hline
 & 12 & 10 & 17 & 28 & 104 & 13 & 60 & 144 & 10
 \end{array}$$

$$\begin{array}{r}
 \times\frac{13}{10} & +\frac{7}{14} & \times\frac{9}{2} & \times\frac{7}{1} & -\frac{18}{14} & +\frac{13}{15} & \times\frac{15}{15} & \times\frac{8}{11} & \times\frac{12}{2} & \times\frac{6}{1} \\
 \hline
 & 130 & 21 & 18 & 7 & 4 & 28 & 225 & 88 & 24
 \end{array}$$

$$\begin{array}{r}
 \times\frac{3}{9} & +\frac{15}{12} & +\frac{1}{5} & +\frac{4}{4} & -\frac{15}{7} & -\frac{15}{13} & \times\frac{8}{3} & +\frac{8}{5} & +\frac{3}{3} & -\frac{18}{9} \\
 \hline
 & 27 & 27 & 6 & 8 & 8 & 24 & 13 & 6 & 9
 \end{array}$$

$$\begin{array}{r}
 \times\frac{8}{5} & -\frac{10}{1} & +\frac{2}{10} & \times\frac{6}{2} & -\frac{5}{4} & -\frac{5}{4} & \times\frac{7}{6} & +\frac{9}{15} & +\frac{7}{1} & +\frac{15}{11} \\
 \hline
 & 40 & 9 & 12 & 12 & 1 & 42 & 24 & 8 & 26
 \end{array}$$

$$\begin{array}{r}
 \times\frac{10}{6} & +\frac{3}{7} & -\frac{18}{10} & \times\frac{13}{3} & -\frac{14}{11} & +\frac{15}{3} & +\frac{12}{11} & -\frac{7}{5} & \times\frac{15}{6} & +\frac{4}{13} \\
 \hline
 & 60 & 10 & 8 & 39 & 3 & 18 & 23 & 2 & 17
 \end{array}$$

Opérations Mixtes (F)

Complétez les exercices suivants

$$\begin{array}{r}
 -20 \\
 -14 \\
 \hline
 -6
 \end{array}
 \quad
 \begin{array}{r}
 \times 9 \\
 \hline
 14
 \end{array}
 \quad
 \begin{array}{r}
 -20 \\
 -9 \\
 \hline
 1
 \end{array}
 \quad
 \begin{array}{r}
 \times 8 \\
 \hline
 15
 \end{array}
 \quad
 \begin{array}{r}
 +1 \\
 \hline
 4
 \end{array}
 \quad
 \begin{array}{r}
 \times 11 \\
 \hline
 10
 \end{array}
 \quad
 \begin{array}{r}
 -13 \\
 \hline
 21
 \end{array}
 \quad
 \begin{array}{r}
 \times 7 \\
 \hline
 8
 \end{array}
 \quad
 \begin{array}{r}
 +1 \\
 \hline
 2
 \end{array}$$

$$\begin{array}{r}
 + 3 \\
 + 12 \\
 \hline
 - 25 \\
 - 12 \\
 \hline
 \times 8 \\
 \times 12 \\
 \hline
 + 27 \\
 + 13 \\
 \hline
 \times 6 \\
 \times 6 \\
 \hline
 + 5 \\
 + 13 \\
 \hline
 - 2 \\
 - 27 \\
 \hline
 \end{array}$$

$$\begin{array}{r} \times 15 \\ \times 7 \\ \hline \end{array} \quad \begin{array}{r} \times 10 \\ \times 2 \\ \hline \end{array} \quad \begin{array}{r} + 6 \\ + 11 \\ \hline \end{array} \quad \begin{array}{r} - 13 \\ - 12 \\ \hline \end{array} \quad \begin{array}{r} - 23 \\ - 12 \\ \hline \end{array} \quad \begin{array}{r} - 15 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} - 10 \\ - 7 \\ \hline \end{array} \quad \begin{array}{r} \times 10 \\ \times 13 \\ \hline \end{array} \quad \begin{array}{r} \times 15 \\ \times 15 \\ \hline \end{array} \quad \begin{array}{r} - 4 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{ccccccccccccc}
 - & 24 & & 14 & & 14 & & 9 & & 8 & & 1 & & 2 & & 13 & & 28 & & 21 \\
 - & 9 & + & 4 & \times & 5 & + & 1 & + & 1 & \times & 1 & + & 14 & - & 8 & - & 13 & - & 14
 \end{array}$$

$$-\frac{26}{14} + \frac{5}{13} + \frac{10}{10} \times \frac{3}{11} + \frac{6}{7} - \frac{27}{14} + \frac{8}{14} - \frac{27}{13} - \frac{20}{8} + \frac{13}{9}$$

$$\begin{array}{ccccccccccccc} \times & 7 & & - & 8 & & - & 21 & & \times & 5 & & - & 27 & & + & 12 & & \times & 15 & & \times & 13 & & - & 13 & & + & 3 \\ \times & 3 & & - & 3 & & - & 6 & & \times & 6 & & - & 13 & & + & 5 & & \times & 3 & & \times & 6 & & - & 4 & & + & 5 \end{array}$$

$$+ \frac{15}{1} - \frac{17}{6} \times \frac{7}{11} \times \frac{9}{11} \times \frac{2}{14} - \frac{23}{10} - \frac{8}{1} - \frac{19}{7} \times \frac{4}{13} \times \frac{6}{10}$$

$$+ \frac{1}{4} + \frac{15}{12} + \frac{14}{5} + \frac{8}{10} + \frac{6}{12} = \frac{18}{8} - \frac{13}{9} \times \frac{3}{7} + \frac{10}{4} + \frac{6}{5}$$

$$= \frac{5}{3} \times \frac{15}{4} - \frac{26}{13} + \frac{15}{15} \times \frac{13}{7} \times \frac{6}{1} \times \frac{7}{7} - \frac{15}{10} + \frac{11}{10} + \frac{8}{8}$$

$$\begin{array}{r} \times 9 \\ \times 3 \\ \hline + 13 \end{array} \quad \begin{array}{r} \times 4 \\ \times 3 \\ \hline - 2 \end{array} \quad \begin{array}{r} - 15 \\ - 12 \\ \hline - 11 \end{array} \quad \begin{array}{r} - 23 \\ - 11 \\ \hline - 5 \end{array} \quad \begin{array}{r} - 18 \\ - 5 \\ \hline \times 2 \end{array} \quad \begin{array}{r} \times 2 \\ \times 2 \\ \hline - 4 \end{array} \quad \begin{array}{r} + 15 \\ + 15 \\ \hline \end{array}$$

Opérations Mixtes Solutions (F)

Complétez les exercices suivants

$$\begin{array}{r}
 - & 20 & - & 14 & \times & 14 & - & 20 & \times & 15 & + & 4 & \times & 10 & - & 21 & \times & 8 & + & 2 \\
 - & 14 & - & 6 & \times & 9 & - & 9 & \times & 8 & + & 1 & \times & 11 & - & 13 & \times & 7 & + & 1 \\
 \hline
 6 & 8 & 126 & 11 & 120 & 5 & 110 & 8 & 56 & 3
 \end{array}$$

$$\begin{array}{r}
 + & 3 & - & 25 & \times & 14 & - & 27 & \times & 13 & \times & 1 & \times & 6 & - & 5 & - & 13 & - & 27 \\
 + & 12 & - & 12 & \times & 8 & - & 12 & \times & 8 & \times & 6 & \times & 6 & + & 13 & - & 2 & - & 12 \\
 \hline
 15 & 13 & 112 & 15 & 104 & 6 & 36 & 18 & 11 & 15
 \end{array}$$

$$\begin{array}{r}
 \times & 15 & \times & 10 & \times & 6 & - & 13 & - & 23 & - & 15 & - & 10 & \times & 10 & \times & 15 & - & 4 \\
 \times & 7 & \times & 2 & \times & 11 & - & 12 & - & 12 & - & 5 & - & 7 & \times & 13 & \times & 15 & - & 3 \\
 \hline
 105 & 20 & 17 & 1 & 11 & 10 & 3 & 130 & 225 & 1
 \end{array}$$

$$\begin{array}{r}
 - & 24 & + & 14 & \times & 14 & + & 9 & + & 8 & \times & 1 & + & 2 & - & 13 & - & 28 & - & 21 \\
 - & 9 & + & 4 & \times & 5 & + & 1 & + & 1 & \times & 1 & + & 14 & - & 8 & - & 13 & - & 14 \\
 \hline
 15 & 18 & 70 & 10 & 9 & 1 & 16 & 5 & 15 & 7
 \end{array}$$

$$\begin{array}{r}
 - & 26 & + & 5 & + & 10 & \times & 3 & + & 6 & - & 27 & + & 8 & - & 27 & - & 20 & + & 13 \\
 - & 14 & + & 13 & + & 10 & \times & 11 & + & 7 & - & 14 & + & 14 & - & 13 & - & 8 & + & 9 \\
 \hline
 12 & 18 & 20 & 33 & 13 & 13 & 22 & 14 & 12 & 22
 \end{array}$$

$$\begin{array}{r}
 \times & 7 & - & 8 & - & 21 & \times & 5 & - & 27 & + & 12 & \times & 15 & \times & 13 & - & 13 & + & 3 \\
 \times & 3 & - & 3 & - & 6 & \times & 6 & - & 13 & + & 5 & \times & 3 & \times & 6 & - & 4 & + & 5 \\
 \hline
 21 & 5 & 15 & 30 & 14 & 17 & 45 & 78 & 9 & 8
 \end{array}$$

$$\begin{array}{r}
 + & 15 & - & 17 & \times & 7 & \times & 9 & \times & 2 & - & 23 & - & 8 & - & 19 & - & 4 & + & 6 \\
 + & 1 & - & 6 & \times & 11 & \times & 11 & \times & 14 & - & 10 & - & 1 & - & 7 & \times & 13 & \times & 10 \\
 \hline
 16 & 11 & 77 & 99 & 28 & 13 & 22 & 14 & 52 & 60
 \end{array}$$

$$\begin{array}{r}
 + & 1 & + & 15 & + & 14 & + & 8 & + & 6 & - & 18 & - & 13 & \times & 3 & + & 10 & + & 6 \\
 + & 4 & + & 12 & + & 5 & + & 10 & + & 12 & - & 8 & - & 9 & \times & 7 & + & 4 & + & 5 \\
 \hline
 5 & 27 & 19 & 18 & 18 & 10 & 4 & 21 & 14 & 11
 \end{array}$$

$$\begin{array}{r}
 - & 5 & \times & 15 & - & 26 & - & 15 & \times & 13 & \times & 6 & \times & 7 & - & 15 & - & 11 & + & 8 \\
 - & 3 & \times & 4 & - & 13 & + & 15 & \times & 7 & \times & 1 & \times & 7 & - & 10 & + & 10 & + & 8 \\
 \hline
 2 & 60 & 13 & 30 & 91 & 6 & 49 & 5 & 21 & 16
 \end{array}$$

$$\begin{array}{r}
 \times & 9 & + & 1 & \times & 4 & - & 7 & - & 15 & - & 23 & - & 18 & \times & 2 & - & 9 & + & 15 \\
 \times & 3 & + & 13 & \times & 3 & - & 2 & - & 12 & - & 11 & - & 5 & \times & 2 & - & 4 & + & 15 \\
 \hline
 27 & 14 & 12 & 5 & 3 & 12 & 13 & 4 & 5 & 30
 \end{array}$$

Opérations Mixtes (G)

Complétez les exercices suivants

$$\begin{array}{r}
 + 13 \\
 + 13 \\
 \hline
 - 13
 \end{array}
 \quad
 \begin{array}{r}
 - 15 \\
 + 15 \\
 \hline
 + 5
 \end{array}
 \quad
 \begin{array}{r}
 \times 5 \\
 \times 15 \\
 \hline
 7
 \end{array}
 \quad
 \begin{array}{r}
 \times 15 \\
 \times 11 \\
 \hline
 10
 \end{array}
 \quad
 \begin{array}{r}
 - 9 \\
 - 11 \\
 \hline
 - 14
 \end{array}
 \quad
 \begin{array}{r}
 \times 2 \\
 \times 11 \\
 \hline
 - 18
 \end{array}
 \quad
 \begin{array}{r}
 \times 2 \\
 \times 11 \\
 \hline
 - 20
 \end{array}$$

$$\begin{array}{r} \times 3 \\ \times 11 \\ \hline + 6 \\ \hline \times 11 \\ - 5 \\ \hline - 15 \\ \times 4 \\ \hline \times 10 \\ \times 5 \\ \hline \times 23 \\ - 10 \\ \hline - 9 \end{array}$$

$$-\frac{10}{4} + \frac{8}{2} - \frac{20}{9} - \frac{26}{13} + \frac{2}{15} - \frac{11}{2} \times \frac{12}{7} \times \frac{4}{6} \times \frac{14}{12} - \frac{27}{14}$$

$$\begin{array}{r}
 + 11 & \times 7 & \times 5 & - 9 & + 1 & \times 10 & \times 10 & + 1 & + 8 & + 10 \\
 + 15 & \times 10 & \times 9 & - 8 & + 1 & \times 6 & \times 3 & + 11 & + 5 & + 4
 \end{array}$$

$$-\frac{17}{5} - \frac{12}{1} \times \frac{7}{15} \times \frac{11}{6} + \frac{15}{14} - \frac{24}{13} \times \frac{10}{10} \times \frac{15}{10} \times \frac{15}{12} \times \frac{7}{3}$$

$$+ \begin{array}{r} 3 \\ 2 \end{array} - \begin{array}{r} 17 \\ 6 \end{array} - \begin{array}{r} 19 \\ 13 \end{array} \times \begin{array}{r} 5 \\ 5 \end{array} - \begin{array}{r} 10 \\ 3 \end{array} + \begin{array}{r} 13 \\ 5 \end{array} + \begin{array}{r} 15 \\ 14 \end{array} - \begin{array}{r} 19 \\ 8 \end{array} + \begin{array}{r} 1 \\ 5 \end{array} - \begin{array}{r} 16 \\ 4 \end{array}$$

$$- \frac{8}{5} + \frac{13}{7} \times \frac{9}{4} \times \frac{2}{6} - \frac{3}{2} + \frac{5}{13} \times \frac{12}{13} \times \frac{15}{12} - \frac{14}{6} \times \frac{5}{12}$$

$$\times \begin{array}{r} 3 \\ 5 \end{array} - \begin{array}{r} 8 \\ 2 \end{array} \times \begin{array}{r} 13 \\ 12 \end{array} \times \begin{array}{r} 12 \\ 13 \end{array} + \begin{array}{r} 12 \\ 1 \end{array} - \begin{array}{r} 13 \\ 8 \end{array} \times \begin{array}{r} 12 \\ 8 \end{array} - \begin{array}{r} 8 \\ 1 \end{array} + \begin{array}{r} 12 \\ 1 \end{array} \times \begin{array}{r} 15 \\ 4 \end{array}$$

$$-\frac{17}{11} \times \frac{12}{4} + \frac{13}{13} + \frac{12}{4} \times \frac{1}{4} + \frac{4}{6} \times \frac{4}{13} - \frac{15}{6} \times \frac{14}{7} + \frac{10}{8}$$

$$+ \frac{3}{13} - \frac{23}{12} \times \frac{11}{14} + \frac{5}{14} \times \frac{3}{13} - \frac{17}{12} \times \frac{9}{14} + \frac{13}{8} + \frac{12}{4} - \frac{8}{4}$$

Opérations Mixtes Solutions (G)

Complétez les exercices suivants

$\frac{13}{+ 13}$	$\frac{15}{- 13}$	$\frac{5}{+ 15}$	$\frac{7}{\times 5}$	$\frac{10}{\times 15}$	$\frac{14}{- 9}$	$\frac{18}{- 11}$	$\frac{5}{\times 2}$	$\frac{9}{\times 11}$	$\frac{20}{- 15}$
$\underline{26}$	$\underline{2}$	$\underline{20}$	$\underline{35}$	$\underline{150}$	$\underline{5}$	$\underline{7}$	$\underline{10}$	$\underline{99}$	$\underline{5}$
$\frac{3}{\times 11}$	$\frac{6}{+ 14}$	$\frac{8}{\times 11}$	$\frac{16}{- 5}$	$\frac{29}{- 15}$	$\frac{15}{\times 4}$	$\frac{9}{\times 10}$	$\frac{4}{\times 5}$	$\frac{23}{- 10}$	$\frac{12}{- 9}$
$\underline{33}$	$\underline{20}$	$\underline{88}$	$\underline{11}$	$\underline{14}$	$\underline{60}$	$\underline{90}$	$\underline{20}$	$\underline{13}$	$\underline{3}$
$\frac{10}{- 4}$	$\frac{8}{+ 2}$	$\frac{20}{- 9}$	$\frac{26}{- 13}$	$\frac{2}{+ 15}$	$\frac{11}{- 2}$	$\frac{12}{\times 7}$	$\frac{4}{\times 6}$	$\frac{14}{\times 12}$	$\frac{27}{- 14}$
$\underline{6}$	$\underline{10}$	$\underline{11}$	$\underline{13}$	$\underline{17}$	$\underline{9}$	$\underline{84}$	$\underline{24}$	$\underline{168}$	$\underline{13}$
$\frac{11}{+ 15}$	$\frac{7}{\times 10}$	$\frac{5}{\times 9}$	$\frac{9}{- 8}$	$\frac{1}{+ 1}$	$\frac{10}{\times 6}$	$\frac{10}{\times 3}$	$\frac{1}{+ 11}$	$\frac{8}{+ 5}$	$\frac{10}{+ 4}$
$\underline{26}$	$\underline{70}$	$\underline{45}$	$\underline{1}$	$\underline{2}$	$\underline{60}$	$\underline{30}$	$\underline{12}$	$\underline{13}$	$\underline{14}$
$\frac{17}{- 5}$	$\frac{12}{- 1}$	$\frac{7}{\times 15}$	$\frac{11}{\times 6}$	$\frac{15}{+ 14}$	$\frac{24}{- 13}$	$\frac{10}{\times 10}$	$\frac{15}{\times 10}$	$\frac{15}{\times 12}$	$\frac{7}{\times 3}$
$\underline{12}$	$\underline{11}$	$\underline{105}$	$\underline{66}$	$\underline{29}$	$\underline{11}$	$\underline{100}$	$\underline{150}$	$\underline{180}$	$\underline{21}$
$\frac{3}{+ 2}$	$\frac{17}{- 6}$	$\frac{19}{- 13}$	$\frac{5}{\times 5}$	$\frac{10}{- 3}$	$\frac{13}{+ 5}$	$\frac{15}{+ 14}$	$\frac{19}{- 8}$	$\frac{1}{+ 5}$	$\frac{16}{- 4}$
$\underline{5}$	$\underline{11}$	$\underline{6}$	$\underline{25}$	$\underline{7}$	$\underline{18}$	$\underline{29}$	$\underline{11}$	$\underline{6}$	$\underline{12}$
$\frac{8}{- 5}$	$\frac{13}{+ 7}$	$\frac{9}{\times 4}$	$\frac{2}{\times 6}$	$\frac{3}{- 2}$	$\frac{5}{+ 13}$	$\frac{12}{\times 13}$	$\frac{15}{\times 12}$	$\frac{14}{- 6}$	$\frac{5}{\times 12}$
$\underline{3}$	$\underline{20}$	$\underline{36}$	$\underline{12}$	$\underline{1}$	$\underline{18}$	$\underline{156}$	$\underline{180}$	$\underline{8}$	$\underline{60}$
$\frac{3}{\times 5}$	$\frac{8}{- 2}$	$\frac{13}{\times 12}$	$\frac{12}{\times 13}$	$\frac{12}{+ 1}$	$\frac{13}{- 8}$	$\frac{12}{\times 8}$	$\frac{8}{- 1}$	$\frac{12}{+ 1}$	$\frac{15}{\times 4}$
$\underline{15}$	$\underline{6}$	$\underline{156}$	$\underline{156}$	$\underline{13}$	$\underline{5}$	$\underline{96}$	$\underline{7}$	$\underline{13}$	$\underline{60}$
$\frac{17}{- 11}$	$\frac{12}{\times 4}$	$\frac{13}{+ 13}$	$\frac{12}{+ 4}$	$\frac{1}{\times 4}$	$\frac{4}{+ 6}$	$\frac{4}{\times 13}$	$\frac{15}{- 6}$	$\frac{14}{\times 7}$	$\frac{10}{+ 8}$
$\underline{6}$	$\underline{48}$	$\underline{26}$	$\underline{16}$	$\underline{4}$	$\underline{10}$	$\underline{52}$	$\underline{9}$	$\underline{98}$	$\underline{18}$
$\frac{3}{+ 13}$	$\frac{23}{- 12}$	$\frac{11}{\times 14}$	$\frac{5}{+ 14}$	$\frac{3}{\times 13}$	$\frac{17}{- 12}$	$\frac{9}{\times 14}$	$\frac{13}{+ 8}$	$\frac{12}{+ 4}$	$\frac{8}{- 4}$
$\underline{16}$	$\underline{11}$	$\underline{154}$	$\underline{19}$	$\underline{39}$	$\underline{5}$	$\underline{126}$	$\underline{21}$	$\underline{16}$	$\underline{4}$

Opérations Mixtes (H)

Complétez les exercices suivants

$$\begin{array}{r} \times 11 \\ \times 2 \\ \hline \end{array} \quad \begin{array}{r} \times 12 \\ \times 10 \\ \hline \end{array} \quad \begin{array}{r} + 15 \\ + 13 \\ \hline \end{array} \quad \begin{array}{r} \times 10 \\ \times 1 \\ \hline \end{array} \quad \begin{array}{r} - 16 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} \times 14 \\ \times 5 \\ \hline \end{array} \quad \begin{array}{r} \times 3 \\ \times 4 \\ \hline \end{array} \quad \begin{array}{r} \times 1 \\ \times 8 \\ \hline \end{array} \quad \begin{array}{r} + 13 \\ + 6 \\ \hline \end{array} \quad \begin{array}{r} + 14 \\ + 13 \\ \hline \end{array}$$

$$\begin{array}{r}
 + \frac{6}{14} \quad + \frac{13}{6} \quad - \frac{16}{7} \quad + \frac{3}{10} \quad - \frac{16}{10} \quad \times \frac{15}{13} \quad \times \frac{3}{7} \quad - \frac{16}{4} \quad \times \frac{8}{9} \quad \times \frac{5}{1}
 \end{array}$$

$$+ \frac{13}{13} + \frac{5}{4} \times \frac{4}{2} \times \frac{5}{12} + \frac{2}{3} \times \frac{7}{4} + \frac{8}{11} + \frac{14}{9} + \frac{9}{1} - \frac{23}{10}$$

$$+ \begin{array}{r} 9 \\ 1 \end{array} \times \begin{array}{r} 10 \\ 4 \end{array} + \begin{array}{r} 13 \\ 13 \end{array} \times \begin{array}{r} 11 \\ 6 \end{array} - \begin{array}{r} 5 \\ 3 \end{array} + \begin{array}{r} 7 \\ 1 \end{array} - \begin{array}{r} 16 \\ 11 \end{array} - \begin{array}{r} 21 \\ 7 \end{array} \times \begin{array}{r} 7 \\ 13 \end{array} + \begin{array}{r} 5 \\ 15 \end{array}$$

$$\begin{array}{ccccccccccccc} \times & 13 & & - & 19 & \times & 12 & \times & 10 & + & 2 & - & 13 & \times & 1 & \times & 7 & + & 15 & + & 2 \\ \times & 3 & & - & 15 & \times & 11 & \times & 11 & + & 5 & - & 6 & \times & 6 & \times & 12 & + & 13 & + & 9 \end{array}$$

$$-\frac{16}{12} - \frac{17}{5} \times \frac{12}{14} + \frac{5}{3} - \frac{11}{5} \times \frac{12}{14} + \frac{14}{6} + \frac{14}{9} - \frac{18}{14} + \frac{7}{3}$$

$$\begin{array}{r} \times 4 \\ \times 11 \\ \hline \end{array} \quad \begin{array}{r} \times 12 \\ \times 1 \\ \hline = 10 \end{array} \quad \begin{array}{r} + 10 \\ + 12 \\ + 4 \\ \hline + 14 \end{array} \quad \begin{array}{r} \times 5 \\ \times 2 \\ \hline = 14 \end{array} \quad \begin{array}{r} \times 9 \\ \times 2 \\ \hline - 14 \end{array} \quad \begin{array}{r} \times 1 \\ \times 15 \\ \hline + 12 \end{array}$$

$$+ \frac{1}{5} + \frac{14}{5} = \frac{15}{12} + \frac{14}{12} \times \frac{2}{13} = \frac{17}{13} - \frac{26}{12} \times \frac{12}{15} \times \frac{1}{11} + \frac{10}{1}$$

$$+ \begin{array}{r} 9 \\ 9 \end{array} + \begin{array}{r} 15 \\ 13 \end{array} - \begin{array}{r} 18 \\ 6 \end{array} - \begin{array}{r} 14 \\ 2 \end{array} \times \begin{array}{r} 15 \\ 8 \end{array} \times \begin{array}{r} 10 \\ 13 \end{array} \times \begin{array}{r} 13 \\ 2 \end{array} - \begin{array}{r} 18 \\ 10 \end{array} - \begin{array}{r} 3 \\ 1 \end{array} + \begin{array}{r} 15 \\ 4 \end{array}$$

$$\begin{array}{r} \times 10 \\ \times 10 \end{array} \quad \begin{array}{r} - 25 \\ - 10 \end{array} \quad \begin{array}{r} 7 \\ \times 7 \end{array} \quad \begin{array}{r} - 18 \\ - 9 \end{array} \quad \begin{array}{r} 16 \\ - 11 \end{array} \quad \begin{array}{r} 28 \\ - 15 \end{array} \quad \begin{array}{r} 9 \\ + 6 \end{array} \quad \begin{array}{r} \times 10 \\ + 11 \end{array}$$

Opérations Mixtes Solutions (H)

Complétez les exercices suivants

$$\begin{array}{r}
 \times 11 & \times 12 & + 15 & \times 10 & - 16 & \times 14 & \times 3 & \times 1 & + 13 & + 14 \\
 \times 2 & \times 10 & + 13 & \times 1 & - 5 & \times 5 & \times 4 & \times 8 & + 6 & + 13 \\
 \hline
 22 & 120 & 28 & 10 & 11 & 70 & 12 & 8 & 19 & 27
 \end{array}$$

$$\begin{array}{r}
 + 6 & + 13 & - 16 & + 3 & - 16 & + 15 & + 3 & - 16 & + 8 & + 5 \\
 + 14 & + 6 & - 7 & + 10 & - 10 & \times 13 & \times 7 & - 4 & \times 9 & \times 1 \\
 \hline
 20 & 19 & 9 & 13 & 6 & 195 & 21 & 12 & 72 & 5
 \end{array}$$

$$\begin{array}{r}
 + 13 & + 5 & + 4 & \times 2 & \times 12 & + 3 & \times 4 & + 11 & + 9 & + 23 \\
 + 13 & + 4 & \times 2 & \times 12 & + 3 & \times 4 & + 11 & + 9 & + 1 & - 10 \\
 \hline
 26 & 9 & 8 & 60 & 5 & 28 & 19 & 23 & 10 & 13
 \end{array}$$

$$\begin{array}{r}
 + 9 & + 10 & + 13 & \times 11 & - 5 & + 7 & - 16 & - 21 & + 7 & + 5 \\
 + 1 & \times 4 & + 13 & \times 6 & - 3 & + 1 & - 11 & - 7 & \times 13 & + 15 \\
 \hline
 10 & 40 & 26 & 66 & 2 & 8 & 5 & 14 & 91 & 20
 \end{array}$$

$$\begin{array}{r}
 \times 13 & - 19 & + 12 & \times 10 & + 2 & - 13 & + 1 & - 7 & + 15 & + 2 \\
 \times 3 & - 15 & \times 11 & \times 11 & + 5 & - 6 & \times 6 & \times 12 & + 13 & + 9 \\
 \hline
 39 & 4 & 132 & 110 & 7 & 7 & 6 & 84 & 28 & 11
 \end{array}$$

$$\begin{array}{r}
 - 16 & - 17 & + 12 & + 5 & - 11 & + 12 & + 14 & + 14 & - 18 & + 7 \\
 - 12 & - 5 & \times 14 & + 3 & - 5 & \times 14 & + 6 & + 9 & - 14 & + 3 \\
 \hline
 4 & 12 & 168 & 8 & 6 & 168 & 20 & 23 & 4 & 10
 \end{array}$$

$$\begin{array}{r}
 \times 4 & \times 12 & - 17 & + 10 & + 12 & + 5 & + 9 & - 20 & + 1 & + 9 \\
 \times 11 & \times 1 & - 10 & + 12 & + 4 & + 14 & \times 2 & - 14 & \times 15 & + 12 \\
 \hline
 44 & 12 & 7 & 22 & 16 & 19 & 18 & 6 & 15 & 21
 \end{array}$$

$$\begin{array}{r}
 + 1 & + 14 & - 15 & + 14 & + 2 & - 17 & - 26 & + 12 & + 1 & + 10 \\
 + 5 & + 5 & - 12 & + 12 & \times 13 & - 13 & - 12 & \times 15 & + 11 & + 1 \\
 \hline
 6 & 19 & 3 & 26 & 26 & 4 & 14 & 180 & 11 & 11
 \end{array}$$

$$\begin{array}{r}
 + 9 & + 15 & - 18 & - 14 & + 15 & + 10 & + 13 & - 18 & + 3 & + 15 \\
 + 9 & + 13 & - 6 & - 2 & \times 8 & \times 13 & \times 2 & - 10 & - 1 & + 4 \\
 \hline
 18 & 28 & 12 & 12 & 120 & 130 & 26 & 8 & 2 & 19
 \end{array}$$

$$\begin{array}{r}
 \times 10 & - 25 & - 25 & + 7 & - 18 & - 16 & - 28 & + 9 & + 7 & + 7 \\
 \times 10 & - 11 & - 10 & \times 7 & - 9 & - 11 & - 15 & + 6 & \times 10 & + 11 \\
 \hline
 100 & 14 & 15 & 49 & 9 & 5 & 13 & 15 & 70 & 18
 \end{array}$$

Opérations Mixtes (I)

Complétez les exercices suivants

$$\begin{array}{r}
 + 12 \\
 + 13 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 + 1 \\
 + 4 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 + 11 \\
 + 14 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 + 6 \\
 + 3 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 \times 14 \\
 \times 13 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 - 12 \\
 - 4 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 + 15 \\
 + 1 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 \times 11 \\
 \times 13 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 \times 10 \\
 \times 6 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 - 19 \\
 - 7 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 + \quad 8 \\
 + \quad 5 \\
 \hline
 - \quad 20
 \end{array}
 \quad
 \begin{array}{r}
 \times \quad 11 \\
 \times \quad 10 \\
 \hline
 - \quad 110
 \end{array}
 \quad
 \begin{array}{r}
 \times \quad 1 \\
 \times \quad 4 \\
 \hline
 - \quad 4
 \end{array}
 \quad
 \begin{array}{r}
 + \quad 13 \\
 + \quad 14 \\
 \hline
 - \quad 27
 \end{array}
 \quad
 \begin{array}{r}
 \times \quad 13 \\
 \times \quad 10 \\
 \hline
 - \quad 130
 \end{array}
 \quad
 \begin{array}{r}
 \times \quad 1 \\
 \times \quad 8 \\
 \hline
 - \quad 8
 \end{array}
 \quad
 \begin{array}{r}
 \times \quad 7 \\
 \times \quad 1 \\
 \hline
 - \quad 7
 \end{array}
 \quad
 \begin{array}{r}
 \times \quad 5 \\
 \times \quad 3 \\
 \hline
 - \quad 15
 \end{array}
 \quad
 \begin{array}{r}
 - \quad 4
 \end{array}$$

$$\times \quad 1 \quad \times \quad 9 \quad + \quad 5 \quad + \quad 11 \quad - \quad 17 \quad + \quad 9 \quad \times \quad 11 \quad + \quad 7 \quad - \quad 22 \quad \times \quad 3$$

$$-\frac{29}{14} - \frac{10}{3} \times \frac{15}{6} - \frac{13}{3} + \frac{5}{10} + \frac{14}{10} \times \frac{9}{5} + \frac{11}{15} - \frac{4}{1} - \frac{24}{15}$$

$$= \frac{7}{5} \times \frac{1}{3} + \frac{1}{9} + \frac{12}{7} \times \frac{9}{14} \times \frac{3}{7} - \frac{16}{3} + \frac{14}{11} - \frac{11}{2} \times \frac{11}{4}$$

$$-\frac{24}{12} + \frac{12}{15} + \frac{1}{2} - \frac{20}{6} - \frac{16}{14} \times \frac{7}{14} - \frac{15}{13} - \frac{23}{13} \times \frac{11}{7} + \frac{15}{4}$$

$$-\frac{25}{15} + \frac{15}{14} \times \frac{13}{5} - \frac{16}{1} \times \frac{7}{13} - \frac{19}{7} - \frac{16}{4} - \frac{13}{4} - \frac{17}{12} + \frac{2}{8}$$

$$- \begin{array}{r} 9 \\ 8 \end{array} \times \begin{array}{r} 13 \\ 15 \end{array} - \begin{array}{r} 18 \\ 8 \end{array} \times \begin{array}{r} 4 \\ 7 \end{array} - \begin{array}{r} 17 \\ 13 \end{array} \times \begin{array}{r} 12 \\ 1 \end{array} - \begin{array}{r} 24 \\ 9 \end{array} + \begin{array}{r} 5 \\ 6 \end{array} + \begin{array}{r} 1 \\ 1 \end{array} - \begin{array}{r} 17 \\ 13 \end{array}$$

$$+ \frac{12}{1} \times \frac{6}{3} + \frac{2}{1} \times \frac{9}{11} \times \frac{13}{9} - \frac{22}{7} + \frac{4}{1} \times \frac{5}{9} - \frac{13}{12} \times \frac{10}{1}$$

$$+ \begin{array}{r} 10 \\ 15 \end{array} \times \begin{array}{r} 8 \\ 14 \end{array} - \begin{array}{r} 9 \\ 1 \end{array} \times \begin{array}{r} 2 \\ 15 \end{array} \times \begin{array}{r} 2 \\ 6 \end{array} + \begin{array}{r} 13 \\ 6 \end{array} - \begin{array}{r} 22 \\ 13 \end{array} + \begin{array}{r} 11 \\ 13 \end{array} + \begin{array}{r} 2 \\ 6 \end{array} + \begin{array}{r} 15 \\ 6 \end{array}$$

Opérations Mixtes Solutions (I)

Complétez les exercices suivants

$$\begin{array}{r}
 12 & 1 & 11 & 6 & 14 & 12 & 15 & 11 & 10 & 19 \\
 + 13 & + 4 & + 14 & + 3 & \times 13 & - 4 & + 1 & \times 13 & \times 6 & - 7 \\
 \hline
 25 & 5 & 25 & 9 & 182 & 8 & 16 & 143 & 60 & 12
 \end{array}$$

$$\begin{array}{r}
 8 & 20 & 11 & 1 & 13 & 13 & 1 & 7 & 5 & 7 \\
 + 5 & - 11 & \times 10 & \times 4 & + 14 & \times 10 & \times 8 & \times 1 & \times 3 & - 4 \\
 \hline
 13 & 9 & 110 & 4 & 27 & 130 & 8 & 7 & 15 & 3
 \end{array}$$

$$\begin{array}{r}
 1 & 9 & 5 & 11 & 17 & 9 & 4 & 7 & 22 & 3 \\
 \times 1 & \times 12 & + 5 & + 1 & - 5 & + 8 & \times 11 & + 2 & - 9 & \times 5 \\
 \hline
 1 & 108 & 10 & 12 & 12 & 17 & 44 & 9 & 13 & 15
 \end{array}$$

$$\begin{array}{r}
 29 & 10 & 15 & 13 & 5 & 14 & 9 & 11 & 4 & 24 \\
 - 14 & - 3 & \times 6 & - 3 & + 10 & + 10 & \times 5 & + 15 & - 1 & - 15 \\
 \hline
 15 & 7 & 90 & 10 & 15 & 24 & 45 & 26 & 3 & 9
 \end{array}$$

$$\begin{array}{r}
 7 & 1 & 1 & 12 & 9 & 3 & 16 & 14 & 11 & 11 \\
 - 5 & \times 3 & + 9 & + 7 & \times 14 & \times 7 & - 3 & + 11 & - 2 & \times 4 \\
 \hline
 2 & 3 & 10 & 19 & 126 & 21 & 13 & 25 & 9 & 44
 \end{array}$$

$$\begin{array}{r}
 24 & 12 & 1 & 20 & 16 & 7 & 15 & 23 & 11 & 15 \\
 - 12 & + 15 & + 2 & - 6 & - 14 & \times 14 & - 13 & - 13 & \times 7 & + 4 \\
 \hline
 12 & 27 & 3 & 14 & 2 & 98 & 2 & 10 & 77 & 19
 \end{array}$$

$$\begin{array}{r}
 25 & 15 & 13 & 16 & 7 & 19 & 16 & 13 & 17 & 2 \\
 - 15 & + 14 & \times 5 & - 1 & \times 13 & - 7 & - 4 & - 4 & - 12 & + 8 \\
 \hline
 10 & 29 & 65 & 15 & 91 & 12 & 12 & 9 & 5 & 10
 \end{array}$$

$$\begin{array}{r}
 9 & 13 & 18 & 4 & 17 & 12 & 24 & 5 & 1 & 17 \\
 - 8 & \times 15 & - 8 & \times 7 & - 13 & \times 1 & - 9 & + 6 & + 1 & - 13 \\
 \hline
 1 & 195 & 10 & 28 & 4 & 12 & 15 & 11 & 2 & 4
 \end{array}$$

$$\begin{array}{r}
 12 & 6 & 2 & 9 & 13 & 22 & 4 & 5 & 13 & 10 \\
 + 1 & \times 3 & + 1 & \times 11 & \times 9 & - 7 & + 1 & \times 9 & - 12 & \times 1 \\
 \hline
 13 & 18 & 3 & 99 & 117 & 15 & 5 & 45 & 1 & 10
 \end{array}$$

$$\begin{array}{r}
 10 & 8 & 9 & 2 & 2 & 13 & 22 & 11 & 2 & 15 \\
 + 15 & \times 14 & - 1 & \times 15 & \times 6 & + 6 & - 13 & + 13 & + 6 & + 6 \\
 \hline
 25 & 112 & 8 & 30 & 12 & 19 & 9 & 24 & 8 & 21
 \end{array}$$

Opérations Mixtes (J)

Complétez les exercices suivants

$$\begin{array}{r} \times & 14 & & 9 & & 9 & & 1 & & -12 & & -24 & & -14 & & 2 & & 5 & & 5 \\ \times & 4 & + & 2 & + & 10 & + & 6 & + & 3 & - & 10 & - & 3 & + & 14 & \times & 8 & \times & 9 \end{array}$$

$$\begin{array}{r}
 -\frac{13}{9} + \frac{3}{9} - \frac{23}{11} - \frac{20}{8} - \frac{24}{10} \times \frac{13}{4} \times \frac{5}{8} \times \frac{15}{10} \times \frac{2}{1} - \frac{22}{11}
 \end{array}$$

$$+ \begin{array}{r} 9 \\ 5 \end{array} \times \begin{array}{r} 15 \\ 4 \end{array} - \begin{array}{r} 10 \\ 5 \end{array} - \begin{array}{r} 22 \\ 14 \end{array} + \begin{array}{r} 11 \\ 14 \end{array} - \begin{array}{r} 16 \\ 10 \end{array} \times \begin{array}{r} 6 \\ 13 \end{array} - \begin{array}{r} 22 \\ 12 \end{array} + \begin{array}{r} 14 \\ 15 \end{array} - \begin{array}{r} 19 \\ 7 \end{array}$$

$$+ \begin{array}{r} 9 \\ 9 \end{array} - \begin{array}{r} 14 \\ 8 \end{array} - \begin{array}{r} 19 \\ 14 \end{array} \times \begin{array}{r} 15 \\ 2 \end{array} \times \begin{array}{r} 9 \\ 5 \end{array} \times \begin{array}{r} 11 \\ 8 \end{array} + \begin{array}{r} 3 \\ 15 \end{array} \times \begin{array}{r} 14 \\ 15 \end{array} \times \begin{array}{r} 2 \\ 1 \end{array} - \begin{array}{r} 18 \\ 11 \end{array}$$

$$+ \frac{10}{6} + \frac{15}{15} \times \frac{10}{4} \times \frac{13}{15} \times \frac{4}{15} + \frac{5}{9} + \frac{11}{1} - \frac{12}{9} \times \frac{1}{6} \times \frac{2}{4}$$

$$+ \begin{array}{r} 7 \\ 15 \end{array} - \begin{array}{r} 20 \\ 13 \end{array} + \begin{array}{r} 15 \\ 10 \end{array} \times \begin{array}{r} 9 \\ 5 \end{array} - \begin{array}{r} 20 \\ 13 \end{array} \times \begin{array}{r} 3 \\ 2 \end{array} - \begin{array}{r} 17 \\ 11 \end{array} - \begin{array}{r} 18 \\ 8 \end{array} - \begin{array}{r} 24 \\ 12 \end{array} \times \begin{array}{r} 6 \\ 12 \end{array}$$

$$+ \frac{8}{15} - \frac{12}{9} - \frac{10}{7} \times \frac{7}{15} \times \frac{4}{15} \times \frac{5}{14} + \frac{8}{10} - \frac{13}{4} \times \frac{1}{14} - \frac{12}{8}$$

$$+ \frac{5}{1} - \frac{24}{14} \times \frac{6}{12} \times \frac{1}{2} - \frac{4}{1} + \frac{7}{7} \times \frac{2}{14} + \frac{12}{10} + \frac{10}{10} - \frac{8}{1}$$

$$\begin{array}{ccccccccccccc} \times & 14 & & \times & 2 & & + & 6 & & - & 6 & & - & 10 & & + & 1 & & \times & 13 & & \times & 10 & & \times & 11 & & - & 17 \\ \times & 14 & & \times & 11 & & + & 12 & & - & 2 & & - & 7 & & + & 4 & & \times & 5 & & \times & 14 & & \times & 11 & & - & 4 \end{array}$$

$$+ \begin{array}{r} 5 \\ 9 \end{array} + \begin{array}{r} 5 \\ 13 \end{array} \times \begin{array}{r} 6 \\ 4 \end{array} + \begin{array}{r} 7 \\ 2 \end{array} - \begin{array}{r} 17 \\ 8 \end{array} + \begin{array}{r} 14 \\ 3 \end{array} + \begin{array}{r} 11 \\ 1 \end{array} - \begin{array}{r} 24 \\ 14 \end{array} + \begin{array}{r} 13 \\ 1 \end{array} - \begin{array}{r} 24 \\ 14 \end{array}$$

Opérations Mixtes Solutions (J)

Complétez les exercices suivants

$\frac{14}{\times 4}$	$\frac{9}{+ 2}$	$\frac{9}{+ 10}$	$\frac{1}{+ 6}$	$\frac{12}{- 3}$	$\frac{24}{- 10}$	$\frac{14}{- 3}$	$\frac{2}{+ 14}$	$\frac{5}{\times 8}$	$\frac{5}{\times 9}$
$\underline{56}$	$\underline{11}$	$\underline{19}$	$\underline{7}$	$\underline{9}$	$\underline{14}$	$\underline{11}$	$\underline{16}$	$\underline{40}$	$\underline{45}$
$\frac{13}{- 9}$	$\frac{3}{+ 9}$	$\frac{23}{- 11}$	$\frac{20}{- 8}$	$\frac{24}{- 10}$	$\frac{13}{\times 4}$	$\frac{5}{\times 8}$	$\frac{15}{\times 10}$	$\frac{2}{\times 1}$	$\frac{22}{- 11}$
$\underline{4}$	$\underline{12}$	$\underline{12}$	$\underline{12}$	$\underline{14}$	$\underline{52}$	$\underline{40}$	$\underline{150}$	$\underline{2}$	$\underline{11}$
$\frac{9}{+ 5}$	$\frac{15}{\times 4}$	$\frac{10}{- 5}$	$\frac{22}{- 14}$	$\frac{11}{+ 14}$	$\frac{16}{- 10}$	$\frac{6}{\times 13}$	$\frac{22}{- 12}$	$\frac{14}{+ 15}$	$\frac{19}{- 7}$
$\underline{14}$	$\underline{60}$	$\underline{5}$	$\underline{8}$	$\underline{25}$	$\underline{6}$	$\underline{78}$	$\underline{10}$	$\underline{29}$	$\underline{12}$
$\frac{9}{+ 9}$	$\frac{14}{- 8}$	$\frac{19}{- 14}$	$\frac{15}{\times 2}$	$\frac{9}{\times 5}$	$\frac{11}{\times 8}$	$\frac{3}{+ 15}$	$\frac{14}{\times 15}$	$\frac{2}{\times 1}$	$\frac{18}{- 11}$
$\underline{18}$	$\underline{6}$	$\underline{5}$	$\underline{30}$	$\underline{45}$	$\underline{88}$	$\underline{18}$	$\underline{210}$	$\underline{2}$	$\underline{7}$
$\frac{10}{+ 6}$	$\frac{15}{+ 15}$	$\frac{10}{\times 4}$	$\frac{13}{\times 15}$	$\frac{4}{\times 15}$	$\frac{5}{+ 9}$	$\frac{11}{+ 1}$	$\frac{12}{- 9}$	$\frac{1}{\times 6}$	$\frac{2}{\times 4}$
$\underline{16}$	$\underline{30}$	$\underline{40}$	$\underline{195}$	$\underline{60}$	$\underline{14}$	$\underline{12}$	$\underline{3}$	$\underline{6}$	$\underline{8}$
$\frac{7}{+ 15}$	$\frac{20}{- 13}$	$\frac{15}{+ 10}$	$\frac{9}{\times 5}$	$\frac{20}{- 13}$	$\frac{3}{\times 2}$	$\frac{17}{- 11}$	$\frac{18}{- 8}$	$\frac{24}{- 12}$	$\frac{6}{\times 12}$
$\underline{22}$	$\underline{7}$	$\underline{25}$	$\underline{45}$	$\underline{7}$	$\underline{6}$	$\underline{6}$	$\underline{10}$	$\underline{12}$	$\underline{72}$
$\frac{8}{+ 15}$	$\frac{12}{- 9}$	$\frac{10}{- 7}$	$\frac{7}{\times 15}$	$\frac{4}{\times 15}$	$\frac{5}{\times 14}$	$\frac{8}{+ 10}$	$\frac{13}{- 4}$	$\frac{1}{\times 14}$	$\frac{12}{- 8}$
$\underline{23}$	$\underline{3}$	$\underline{3}$	$\underline{105}$	$\underline{60}$	$\underline{70}$	$\underline{18}$	$\underline{9}$	$\underline{14}$	$\underline{4}$
$\frac{5}{+ 1}$	$\frac{24}{- 14}$	$\frac{6}{\times 12}$	$\frac{1}{\times 2}$	$\frac{4}{- 1}$	$\frac{7}{+ 7}$	$\frac{2}{\times 14}$	$\frac{12}{+ 10}$	$\frac{10}{+ 10}$	$\frac{8}{- 1}$
$\underline{6}$	$\underline{10}$	$\underline{72}$	$\underline{2}$	$\underline{3}$	$\underline{14}$	$\underline{28}$	$\underline{22}$	$\underline{20}$	$\underline{7}$
$\frac{14}{\times 14}$	$\frac{2}{\times 11}$	$\frac{6}{+ 12}$	$\frac{6}{- 2}$	$\frac{10}{- 7}$	$\frac{1}{+ 4}$	$\frac{13}{\times 5}$	$\frac{10}{\times 14}$	$\frac{11}{\times 11}$	$\frac{17}{- 4}$
$\underline{196}$	$\underline{22}$	$\underline{18}$	$\underline{4}$	$\underline{3}$	$\underline{5}$	$\underline{65}$	$\underline{140}$	$\underline{121}$	$\underline{13}$
$\frac{5}{+ 9}$	$\frac{5}{+ 13}$	$\frac{6}{\times 4}$	$\frac{7}{+ 2}$	$\frac{17}{- 8}$	$\frac{14}{+ 3}$	$\frac{11}{+ 1}$	$\frac{24}{- 14}$	$\frac{13}{+ 1}$	$\frac{24}{- 14}$
$\underline{14}$	$\underline{18}$	$\underline{24}$	$\underline{9}$	$\underline{9}$	$\underline{17}$	$\underline{12}$	$\underline{10}$	$\underline{14}$	$\underline{10}$