

$$105. i \quad \begin{array}{l} x = \frac{1}{2}, y = \frac{1}{2} \\ \text{LHS} = x + y \\ = \frac{1}{2} + \frac{1}{2} \\ = 1 \end{array} \quad \left| \quad \begin{array}{l} y + x \\ = \frac{1}{2} + \frac{1}{2} \\ = 1 \end{array} \right.$$

$\therefore x + y = y + x$

$$\textcircled{ii} \quad \begin{array}{l} x = -\frac{2}{3}, y = -\frac{5}{6} \\ \text{LHS} = x + y \\ = -\frac{2}{3} + -\frac{5}{6} \\ = \frac{-4 + -5}{6} \\ = -\frac{9}{6} \\ = -\frac{3}{2} \end{array} \quad \left| \quad \begin{array}{l} y + x = -\frac{5}{6} + -\frac{2}{3} \\ = \frac{-5 + -4}{6} \\ = -\frac{9}{6} \\ = -\frac{3}{2} \end{array} \right.$$

$\therefore x + y = y + x$

$$\textcircled{iii} \quad \begin{array}{l} x = -\frac{3}{7}, y = \frac{20}{21} \\ \text{LHS} = x + y \\ = -\frac{3}{7} + \frac{20}{21} \\ = \frac{-9 + 20}{21} \\ = \frac{11}{21} \end{array} \quad \left| \quad \begin{array}{l} \text{RHS} = y + x \\ = \frac{20}{21} + -\frac{3}{7} \\ = \frac{20 + -9}{21} \\ = \frac{11}{21} \end{array} \right. \quad \therefore x + y = y + x$$

$$\textcircled{iv} \quad \begin{array}{l} x = -\frac{2}{5}, y = -\frac{9}{10} \\ \text{LHS} = x + y \\ = -\frac{2}{5} + -\frac{9}{10} \\ = \frac{-4 + -9}{10} \\ = -\frac{13}{10} \end{array} \quad \left| \quad \begin{array}{l} \text{RHS} = y + x \\ = -\frac{9}{10} + -\frac{2}{5} \\ = \frac{-9 + -4}{10} \\ = -\frac{13}{10} \end{array} \right. \quad \therefore x + y = y + x$$