Fraction Multiplication

1) Show that $1\frac{2}{3} \times 2\frac{1}{15} = 3\frac{4}{9}$

Sol: L.H.S

$$1\frac{2}{3} \times 2\frac{1}{15} = \frac{5}{3} \times \frac{31}{15} = \frac{155}{45}$$

$$= \frac{155}{45} = \frac{31}{9} = \frac{31}{9} = 3\frac{4}{9}$$

L.H.S

$$\begin{array}{r} 31 \\ \times\ 5 \\ \hline 155 \end{array} \qquad \begin{array}{r} 15 \\ \times\ 3 \\ \hline 45 \end{array}$$

$$9\overline{)31}\ (3,\ 27,\ 4)$$

Fraction Division

2) show that $4\frac{2}{3} \div 1\frac{1}{9} = 4\frac{1}{5}$

Sol: L.H.S

$$4\frac{2}{3} \div 1\frac{1}{9} = \frac{14}{3} \div \frac{10}{9}$$

$$= \frac{14}{3} \div \frac{10}{9} \Rightarrow \frac{14}{3} \times \frac{9}{10} = \frac{126}{30}$$

$$= \frac{126}{30} = \frac{63}{15} = \frac{21}{5} = 4\frac{1}{5}$$

$$\begin{array}{r} (3) \\ 14 \\ \times\ 9 \\ \hline 126 \end{array}$$

$$5\overline{)21}\ (4,\ 20,\ 1)$$

3) Show that $\frac{8}{9} \times 3\frac{1}{2} \div 2\frac{1}{3} = 1\frac{1}{3}$

Sol: L.H.S

$$\frac{8}{9} \times 3\frac{1}{2} \div 2\frac{1}{3} \Rightarrow \frac{8}{9} \times \frac{7}{2} \div \frac{7}{3}$$

$$= \frac{8}{9} \times \frac{7}{2} \times \frac{3}{7} = \frac{8^{4}}{9_{3}} \times \frac{1}{2} \times \frac{3^{1}}{1} = \frac{4}{3} \times \frac{1}{1} \times \frac{1}{1}$$

$$\Rightarrow \frac{4}{3} = 1\frac{1}{3}$$

$$3\overline{)4}\ (1,\ 3,\ 1)$$