Order of Operations with Fractions (G)

Name: _____ Date: _____

Simplify each expression using the correct order of operations.

$\left(\frac{2}{3} \times \frac{3}{4}\right) \div \left(\frac{5}{8} - \frac{1}{3} + \frac{7}{9} - \frac{1}{6}\right)$

$\frac{5}{6} + \frac{1}{4} - \frac{2}{5} \times \left(\left(\frac{3}{8} \div \frac{3}{4}\right) \div \frac{1}{3}\right)$

$\left(\left(\frac{1}{3} + \frac{1}{9}\right) \times \frac{1}{5}\right) \div \left(\frac{7}{8} - \frac{3}{5}\right) \div \frac{5}{9}$

$\left(\frac{7}{9} \div \frac{1}{5}\right) \times \left(\left(\frac{1}{3} - \frac{2}{9} + \frac{8}{9}\right) \div \frac{2}{3}\right)$

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$\left(\frac{2}{3} \times \frac{3}{4}\right) \div \left(\frac{5}{8} - \frac{1}{3} + \frac{7}{9} - \frac{1}{6}\right)$

$= \frac{1}{2} \div \left(\frac{5}{8} - \frac{1}{3} + \frac{7}{9} - \frac{1}{6}\right)$

$= \frac{1}{2} \div \left(\frac{7}{24} + \frac{7}{9} - \frac{1}{6}\right)$

$= \frac{1}{2} \div \left(\frac{77}{72} - \frac{1}{6}\right)$

$= \frac{1}{2} \div \frac{65}{72}$

$= \frac{36}{65}$

$\frac{5}{6} + \frac{1}{4} - \frac{2}{5} \times \left(\left(\frac{3}{8} \div \frac{3}{4}\right) \div \frac{1}{3}\right)$

$= \frac{5}{6} + \frac{1}{4} - \frac{2}{5} \times \left(\frac{1}{2} \div \frac{1}{3}\right)$

$= \frac{5}{6} + \frac{1}{4} - \frac{2}{5} \times \frac{3}{2}$

$= \frac{5}{6} + \frac{1}{4} - \frac{3}{5}$

$= \frac{13}{12} - \frac{3}{5}$

$= \frac{29}{60}$

$\left(\left(\frac{1}{3} + \frac{1}{9}\right) \times \frac{1}{5}\right) \div \left(\frac{7}{8} - \frac{3}{5}\right) \div \frac{5}{9}$

$= \left(\frac{4}{9} \times \frac{1}{5}\right) \div \left(\frac{7}{8} - \frac{3}{5}\right) \div \frac{5}{9}$

$= \frac{4}{45} \div \left(\frac{7}{8} - \frac{3}{5}\right) \div \frac{5}{9}$

$= \frac{4}{45} \div \frac{11}{40} \div \frac{5}{9}$

$= \frac{32}{99} \div \frac{5}{9}$

$= \frac{32}{55}$

$\left(\frac{7}{9} \div \frac{1}{5}\right) \times \left(\left(\frac{1}{3} - \frac{2}{9} + \frac{8}{9}\right) \div \frac{2}{3}\right)$

$= \frac{35}{9} \times \left(\left(\frac{1}{3} - \frac{2}{9} + \frac{8}{9}\right) \div \frac{2}{3}\right)$

$= \frac{35}{9} \times \left(\left(\frac{1}{9} + \frac{8}{9}\right) \div \frac{2}{3}\right)$

$= \frac{35}{9} \times \left(1 \div \frac{2}{3}\right)$

$= \frac{35}{9} \times \frac{3}{2}$

$= \frac{35}{6}$

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