

Order of Operations with Fractions (A)

Name: _____

Date: _____

Solve each expression using the correct order of operations.

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

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

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$$\begin{aligned}
 & \left(\frac{1}{9} \times \frac{3}{5} \right) \div \left(\frac{7}{9} + \frac{1}{8} - \frac{3}{4} \right) \times \left(\frac{3}{8} + \frac{1}{6} \right) \\
 &= \frac{1}{15} \div \left(\frac{7}{9} + \frac{1}{8} - \frac{3}{4} \right) \times \left(\frac{3}{8} + \frac{1}{6} \right) \\
 &= \frac{1}{15} \div \left(\frac{65}{72} - \frac{3}{4} \right) \times \left(\frac{3}{8} + \frac{1}{6} \right) \\
 &= \frac{1}{15} \div \frac{11}{72} \times \left(\frac{3}{8} + \frac{1}{6} \right) \\
 &= \frac{1}{15} \div \frac{11}{72} \times \frac{13}{24} \\
 &= \frac{24}{55} \times \frac{13}{24} \\
 &= \frac{13}{55}
 \end{aligned}$$

$$\begin{aligned}
 & \left(\left(\frac{1}{4} + \frac{1}{2} \right) \div \frac{4}{5} \right) \times \frac{8}{9} - \frac{5}{6} + \frac{1}{5} \times \frac{3}{8} \\
 &= \left(\frac{3}{4} \div \frac{4}{5} \right) \times \frac{8}{9} - \frac{5}{6} + \frac{1}{5} \times \frac{3}{8} \\
 &= \frac{15}{16} \times \frac{8}{9} - \frac{5}{6} + \frac{1}{5} \times \frac{3}{8} \\
 &= \frac{5}{6} - \frac{5}{6} + \frac{1}{5} \times \frac{3}{8} \\
 &= \frac{5}{6} - \frac{5}{6} + \frac{3}{40} \\
 &= 0 + \frac{3}{40} \\
 &= \frac{3}{40}
 \end{aligned}$$

$$\begin{aligned}
 & \left(\frac{2}{3} \div \frac{8}{9} \right) \times \left(\frac{4}{5} + \frac{2}{5} - \frac{1}{5} \right) \times \left(\frac{1}{9} \div \frac{3}{5} \right) \\
 &= \frac{3}{4} \times \left(\frac{4}{5} + \frac{2}{5} - \frac{1}{5} \right) \times \left(\frac{1}{9} \div \frac{3}{5} \right) \\
 &= \frac{3}{4} \times \left(\frac{6}{5} - \frac{1}{5} \right) \times \left(\frac{1}{9} \div \frac{3}{5} \right) \\
 &= \frac{3}{4} \times 1 \times \left(\frac{1}{9} \div \frac{3}{5} \right) \\
 &= \frac{3}{4} \times 1 \times \frac{5}{27} \\
 &= \frac{3}{4} \times \frac{5}{27} \\
 &= \frac{5}{36}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{3}{5} + \frac{3}{4} \times \left(\frac{4}{5} - \frac{1}{5} \right) \div \frac{1}{6} \div \left(\frac{1}{2} \times \frac{1}{3} \right) \\
 &= \frac{3}{5} + \frac{3}{4} \times \frac{3}{5} \div \frac{1}{6} \div \left(\frac{1}{2} \times \frac{1}{3} \right) \\
 &= \frac{3}{5} + \frac{3}{4} \times \frac{3}{5} \div \frac{1}{6} \div \frac{1}{6} \\
 &= \frac{3}{5} + \frac{9}{20} \div \frac{1}{6} \div \frac{1}{6} \\
 &= \frac{3}{5} + \frac{27}{10} \div \frac{1}{6} \\
 &= \frac{3}{5} + \frac{81}{5} \\
 &= \frac{84}{5} \\
 &= 16\frac{4}{5}
 \end{aligned}$$