

Order of Operations with Fractions (C)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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$$\begin{aligned} & \left(\frac{3}{8} \div \frac{1}{6} \right) \times \left(\frac{1}{2} + \frac{2}{9} - \frac{1}{3} + \frac{7}{8} \right) \\ &= \frac{9}{4} \times \left(\frac{1}{2} + \frac{2}{9} - \frac{1}{3} + \frac{7}{8} \right) \\ &= \frac{9}{4} \times \left(\frac{13}{18} - \frac{1}{3} + \frac{7}{8} \right) \\ &= \frac{9}{4} \times \left(\frac{7}{18} + \frac{7}{8} \right) \\ &= \frac{9}{4} \times \frac{91}{72} \\ &= \frac{91}{32} \\ &= 2\frac{27}{32} \end{aligned}$$

$$\begin{aligned} & \left(\frac{1}{2} + \frac{1}{3} - \frac{1}{5} \right) \div \left(\frac{3}{4} \times \left(\frac{1}{6} \times \frac{2}{3} \right) \right) \\ &= \left(\frac{5}{6} - \frac{1}{5} \right) \div \left(\frac{3}{4} \times \left(\frac{1}{6} \times \frac{2}{3} \right) \right) \\ &= \frac{19}{30} \div \left(\frac{3}{4} \times \left(\frac{1}{6} \times \frac{2}{3} \right) \right) \\ &= \frac{19}{30} \div \left(\frac{3}{4} \times \frac{1}{9} \right) \\ &= \frac{19}{30} \div \frac{1}{12} \\ &= \frac{38}{5} \\ &= 7\frac{3}{5} \end{aligned}$$

$$\begin{aligned} & \left(\frac{3}{5} \div \left(\frac{1}{2} - \frac{4}{9} + \frac{5}{6} \right) \right) \times \left(\frac{8}{9} \times \frac{1}{6} \right) \\ &= \left(\frac{3}{5} \div \left(\frac{1}{18} + \frac{5}{6} \right) \right) \times \left(\frac{8}{9} \times \frac{1}{6} \right) \\ &= \left(\frac{3}{5} \div \frac{8}{9} \right) \times \left(\frac{8}{9} \times \frac{1}{6} \right) \\ &= \frac{27}{40} \times \left(\frac{8}{9} \times \frac{1}{6} \right) \\ &= \frac{27}{40} \times \frac{4}{27} \\ &= \frac{1}{10} \end{aligned}$$

$$\begin{aligned} & \left(\frac{7}{9} - \frac{4}{9} \right) \times \left(\frac{3}{8} + \frac{3}{5} \right) \div \left(\frac{5}{8} - \frac{2}{5} \right) \\ &= \frac{1}{3} \times \left(\frac{3}{8} + \frac{3}{5} \right) \div \left(\frac{5}{8} - \frac{2}{5} \right) \\ &= \frac{1}{3} \times \frac{39}{40} \div \left(\frac{5}{8} - \frac{2}{5} \right) \\ &= \frac{1}{3} \times \frac{39}{40} \div \frac{9}{40} \\ &= \frac{13}{40} \div \frac{9}{40} \\ &= \frac{13}{9} \\ &= 1\frac{4}{9} \end{aligned}$$