

Order of Operations with Fractions (C)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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$$\begin{aligned} & \frac{2}{9} \times \left(\frac{1}{4} + \frac{1}{5} \div \left(\frac{1}{3} \right)^2 \right) \\ &= \frac{2}{9} \times \left(\frac{1}{4} + \frac{1}{5} \div \frac{1}{9} \right) \\ &= \frac{2}{9} \times \left(\frac{1}{4} + \frac{9}{5} \right) \\ &= \frac{2}{9} \times \frac{41}{20} \\ &= \frac{41}{90} \end{aligned}$$

$$\begin{aligned} & \left(\frac{1}{3} + \frac{7}{9} \right) \times \left(\frac{4}{5} - \left(\frac{3}{5} \right)^2 \right) \\ &= \frac{10}{9} \times \left(\frac{4}{5} - \left(\frac{3}{5} \right)^2 \right) \\ &= \frac{10}{9} \times \left(\frac{4}{5} - \frac{9}{25} \right) \\ &= \frac{10}{9} \times \frac{11}{25} \\ &= \frac{22}{45} \end{aligned}$$

$$\begin{aligned} & \frac{1}{8} \div \left(\frac{2}{5} \times \frac{5}{8} - \left(\frac{1}{2} \right)^3 \right) \\ &= \frac{1}{8} \div \left(\frac{2}{5} \times \frac{5}{8} - \frac{1}{8} \right) \\ &= \frac{1}{8} \div \left(\frac{1}{4} - \frac{1}{8} \right) \\ &= \frac{1}{8} \div \frac{1}{8} \\ &= 1 \end{aligned}$$

$$\begin{aligned} & \left(\frac{5}{8} + \frac{1}{6} - \left(\frac{1}{2} \right)^3 \right) \div \frac{4}{9} \\ &= \left(\frac{5}{8} + \frac{1}{6} - \frac{1}{8} \right) \div \frac{4}{9} \\ &= \left(\frac{19}{24} - \frac{1}{8} \right) \div \frac{4}{9} \\ &= \frac{2}{3} \div \frac{4}{9} \\ &= \frac{3}{2} \\ &= 1\frac{1}{2} \end{aligned}$$