

Order of Operations with Fractions (C)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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$$\begin{aligned} & \left(\left(\frac{-2}{3} \right) - \frac{3}{8} + \left(-\frac{3}{4} \right) \right) \div \left(\frac{3}{4} \right)^2 \\ & = \left(\left(\frac{-25}{24} \right) + \left(-\frac{3}{4} \right) \right) \div \left(\frac{3}{4} \right)^2 \\ & = \left(-\frac{43}{24} \right) \div \left(\frac{3}{4} \right)^2 \\ & = \left(-\frac{43}{24} \right) \div \frac{9}{16} \\ & = -\frac{86}{27} \\ & = -3\frac{5}{27} \end{aligned}$$

$$\begin{aligned} & \left(\left(\left(\frac{-2}{5} \right) - \frac{4}{5} \right)^2 \times \frac{5}{6} \right) \div \left(-\frac{5}{8} \right) \\ & = \left(\left(\frac{-6}{5} \right)^2 \times \frac{5}{6} \right) \div \left(-\frac{5}{8} \right) \\ & = \left(\frac{36}{25} \times \frac{5}{6} \right) \div \left(-\frac{5}{8} \right) \\ & = \frac{6}{5} \div \left(-\frac{5}{8} \right) \\ & = -\frac{48}{25} \\ & = -1\frac{23}{25} \end{aligned}$$

$$\begin{aligned} & \frac{1}{6} \times \left(\frac{2}{9} \div \left(\frac{2}{3} \right)^2 - \frac{2}{5} \right) \\ & = \frac{1}{6} \times \left(\frac{2}{9} \div \frac{4}{9} - \frac{2}{5} \right) \\ & = \frac{1}{6} \times \left(\frac{1}{2} - \frac{2}{5} \right) \\ & = \frac{1}{6} \times \frac{1}{10} \\ & = \frac{1}{60} \end{aligned}$$

$$\begin{aligned} & \left(\left(\frac{1}{3} \right)^3 + \left(-\frac{2}{9} \right) \right) \times \left(\left(-\frac{7}{8} \right) \div \left(-\frac{1}{3} \right) \right) \\ & = \left(\frac{1}{27} + \left(-\frac{2}{9} \right) \right) \times \left(\left(-\frac{7}{8} \right) \div \left(-\frac{1}{3} \right) \right) \\ & = \left(-\frac{5}{27} \right) \times \left(\left(-\frac{7}{8} \right) \div \left(-\frac{1}{3} \right) \right) \\ & = \left(-\frac{5}{27} \right) \times \frac{21}{8} \\ & = -\frac{35}{72} \end{aligned}$$