

Order of Operations with Fractions (H)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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$$\begin{aligned} & \frac{3}{8} \div \left(\left(-\frac{2}{9} \right) - \frac{7}{9} + \left(-\frac{1}{4} \right)^2 \right) \\ &= \frac{3}{8} \div \left(\left(-\frac{2}{9} \right) - \frac{7}{9} + \frac{1}{16} \right) \\ &= \frac{3}{8} \div \left(-1 + \frac{1}{16} \right) \\ &= \frac{3}{8} \div \left(-\frac{15}{16} \right) \\ &= -\frac{2}{5} \end{aligned}$$

$$\begin{aligned} & \left(\left(-\frac{3}{5} \right) + \left(-\frac{1}{2} \right) \right) \times \left(\left(-\frac{1}{9} \right) - \left(\frac{1}{6} \right)^2 \right) \\ &= \left(-\frac{11}{10} \right) \times \left(\left(-\frac{1}{9} \right) - \left(\frac{1}{6} \right)^2 \right) \\ &= \left(-\frac{11}{10} \right) \times \left(\left(-\frac{1}{9} \right) - \frac{1}{36} \right) \\ &= \left(-\frac{11}{10} \right) \times \left(-\frac{5}{36} \right) \\ &= \frac{11}{72} \end{aligned}$$

$$\begin{aligned} & \left(\frac{3}{5} - \left(-\frac{3}{5} \right)^2 + \left(-\frac{1}{3} \right) \right) \div \left(-\frac{4}{5} \right) \\ &= \left(\frac{3}{5} - \frac{9}{25} + \left(-\frac{1}{3} \right) \right) \div \left(-\frac{4}{5} \right) \\ &= \left(\frac{6}{25} + \left(-\frac{1}{3} \right) \right) \div \left(-\frac{4}{5} \right) \\ &= \left(-\frac{7}{75} \right) \div \left(-\frac{4}{5} \right) \\ &= \frac{7}{60} \end{aligned}$$

$$\begin{aligned} & \left(\frac{1}{3} + \left(\frac{2}{3} \right)^3 - \left(-\frac{5}{9} \right) \right) \div \frac{4}{9} \\ &= \left(\frac{1}{3} + \frac{8}{27} - \left(-\frac{5}{9} \right) \right) \div \frac{4}{9} \\ &= \left(\frac{17}{27} - \left(-\frac{5}{9} \right) \right) \div \frac{4}{9} \\ &= \frac{32}{27} \div \frac{4}{9} \\ &= \frac{8}{3} \\ &= 2\frac{2}{3} \end{aligned}$$