

Order of Operations with Fractions (H)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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

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

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$$\begin{aligned} & \left(\frac{1}{3} \right)^2 - \frac{8}{9} \div \left(-\frac{5}{8} \right) \\ & = \frac{1}{9} - \frac{8}{9} \div \left(-\frac{5}{8} \right) \\ & = \frac{-7}{9} \div \left(-\frac{5}{8} \right) \\ & = \frac{56}{45} \\ & = 1 \frac{11}{45} \end{aligned}$$

$$\begin{aligned} & \left(-\frac{5}{6} \right) \times \left(\frac{1}{2} \right)^2 - \frac{4}{5} \\ & = \left(-\frac{5}{6} \right) \times \frac{1}{4} - \frac{4}{5} \\ & = \frac{-5}{24} - \frac{11}{20} \\ & = \frac{11}{24} \end{aligned}$$

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

$$\begin{aligned} & \left(-\frac{5}{9} \right)^2 + \left(-\frac{1}{9} \right) \times \left(-\frac{7}{9} \right) \\ & = \frac{25}{81} + \frac{7}{81} \\ & = \frac{32}{81} \end{aligned}$$

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

$$\begin{aligned} & \left(-\frac{2}{5} \right) \times \left(\frac{5}{6} + \left(\frac{1}{3} \right)^2 \right) \\ & = \left(-\frac{2}{5} \right) \times \left(\frac{5}{6} + \frac{1}{9} \right) \\ & = \frac{-2}{5} \times \frac{17}{18} \\ & = -\frac{17}{45} \end{aligned}$$