

Order of Operations with Fractions (F)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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$$\begin{aligned} & \left(-\frac{3}{5}\right)^2 - \left(\frac{3}{5}\right)^2 \times \left(-\frac{4}{9}\right) \div \left(\frac{5}{8} + \frac{7}{8}\right) \\ &= \underline{\left(-\frac{3}{5}\right)^2} - \left(\frac{3}{5}\right)^2 \times \left(-\frac{4}{9}\right) \div \frac{3}{2} \\ &= \frac{9}{25} - \underline{\left(\frac{3}{5}\right)^2} \times \left(-\frac{4}{9}\right) \div \frac{3}{2} \\ &= \frac{9}{25} - \underline{\frac{9}{25} \times \left(-\frac{4}{9}\right)} \div \frac{3}{2} \\ &= \frac{9}{25} - \underline{\left(-\frac{4}{25}\right) \div \frac{3}{2}} \\ &= \underline{\frac{9}{25} - \left(-\frac{8}{75}\right)} \\ &= \frac{7}{15} \end{aligned}$$

$$\begin{aligned} & \left(\frac{1}{5}\right)^2 - \frac{3}{4} \times \left(\underline{\left(\frac{2}{5}\right)^2} \div \left(-\frac{2}{3}\right) + \frac{4}{5}\right) \\ &= \left(\frac{1}{5}\right)^2 - \frac{3}{4} \times \left(\underline{\frac{4}{25} \div \left(-\frac{2}{3}\right)} + \frac{4}{5}\right) \\ &= \left(\frac{1}{5}\right)^2 - \frac{3}{4} \times \left(\underline{\left(-\frac{6}{25}\right) + \frac{4}{5}}\right) \\ &= \underline{\left(\frac{1}{5}\right)^2} - \frac{3}{4} \times \frac{14}{25} \\ &= \frac{1}{25} - \frac{3}{4} \times \frac{14}{25} \\ &= \underline{\frac{1}{25} - \frac{21}{50}} \\ &= -\frac{19}{50} \end{aligned}$$