

Order of Operations with Fractions (F)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

$$\frac{3}{8} \times \left(\left(\frac{1}{2}\right)^2 - \left(-\frac{5}{6}\right)\right)$$

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

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

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

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

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$$\begin{aligned} & \left(-\frac{1}{2}\right) - \left(-\frac{7}{8}\right)^2 \div \frac{1}{8} \\ &= \left(-\frac{1}{2}\right) - \frac{49}{64} \div \frac{1}{8} \\ &= \left(-\frac{1}{2}\right) - \frac{49}{8} \\ &= -\frac{53}{8} \\ &= -6\frac{5}{8} \end{aligned}$$

$$\begin{aligned} & \frac{3}{8} \times \left(\left(\frac{1}{2}\right)^2 - \left(-\frac{5}{6}\right)\right) \\ &= \frac{3}{8} \times \left(\frac{1}{4} - \left(-\frac{5}{6}\right)\right) \\ &= \frac{3}{8} \times \frac{13}{12} \\ &= \frac{13}{32} \end{aligned}$$

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

$$\begin{aligned} & \frac{3}{5} \div \left(\left(\frac{1}{4}\right)^2 + \frac{4}{5}\right) \\ &= \frac{3}{5} \div \left(\frac{1}{16} + \frac{4}{5}\right) \\ &= \frac{3}{5} \div \frac{69}{80} \\ &= \frac{16}{23} \end{aligned}$$

$$\begin{aligned} & \left(\left(\frac{1}{3}\right)^2 + \frac{1}{9}\right) \times \frac{4}{9} \\ &= \left(\frac{1}{9} + \frac{1}{9}\right) \times \frac{4}{9} \\ &= \frac{2}{9} \times \frac{4}{9} \\ &= \frac{8}{81} \end{aligned}$$

$$\begin{aligned} & \left(-\frac{3}{4}\right)^2 \div \left(-\frac{1}{4}\right) - \frac{1}{5} \\ &= \frac{9}{16} \div \left(-\frac{1}{4}\right) - \frac{1}{5} \\ &= \left(-\frac{9}{4}\right) - \frac{1}{5} \\ &= -\frac{49}{20} \\ &= -2\frac{9}{20} \end{aligned}$$