

Order of Operations with Fractions (F)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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

$$\frac{5}{6} - \frac{1}{5} \div \left(\frac{3}{4}\right)^2$$

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

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

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

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$$\begin{aligned} & \frac{3}{4} \times \frac{7}{8} - \left(\frac{3}{8}\right)^2 \\ &= \frac{3}{4} \times \frac{7}{8} - \frac{9}{64} \\ &= \frac{21}{32} - \frac{9}{64} \\ &= \frac{33}{64} \end{aligned}$$

$$\begin{aligned} & \left(\frac{2}{3} + \frac{7}{8}\right) \times \left(\frac{1}{2}\right)^2 \\ &= \frac{37}{24} \times \left(\frac{1}{2}\right)^2 \\ &= \frac{37}{24} \times \frac{1}{4} \\ &= \frac{37}{96} \end{aligned}$$

$$\begin{aligned} & \frac{8}{9} + \frac{2}{5} \times \left(\frac{2}{3}\right)^2 \\ &= \frac{8}{9} + \frac{2}{5} \times \frac{4}{9} \\ &= \frac{8}{9} + \frac{8}{45} \\ &= \frac{16}{15} \\ &= 1\frac{1}{15} \end{aligned}$$

$$\begin{aligned} & \frac{1}{3} \times \left(\frac{5}{6} + \frac{1}{2}\right)^2 \\ &= \frac{1}{3} \times \left(\frac{4}{3}\right)^2 \\ &= \frac{1}{3} \times \frac{16}{9} \\ &= \frac{16}{27} \end{aligned}$$

$$\begin{aligned} & \left(\frac{2}{5} + \frac{4}{5}\right)^2 \div \frac{8}{9} \\ &= \left(\frac{6}{5}\right)^2 \div \frac{8}{9} \\ &= \frac{36}{25} \div \frac{8}{9} \\ &= \frac{81}{50} \\ &= 1\frac{31}{50} \end{aligned}$$

$$\begin{aligned} & \frac{5}{6} - \frac{1}{5} \div \left(\frac{3}{4}\right)^2 \\ &= \frac{5}{6} - \frac{1}{5} \div \frac{9}{16} \\ &= \frac{5}{6} - \frac{16}{45} \\ &= \frac{43}{90} \end{aligned}$$

$$\begin{aligned} & \frac{7}{9} \times \left(\frac{3}{8} + \frac{1}{8}\right)^2 \\ &= \frac{7}{9} \times \left(\frac{1}{2}\right)^2 \\ &= \frac{7}{9} \times \frac{1}{4} \\ &= \frac{7}{36} \end{aligned}$$

$$\begin{aligned} & \frac{3}{4} \times \left(\frac{4}{5} - \left(\frac{3}{5}\right)^2\right) \\ &= \frac{3}{4} \times \left(\frac{4}{5} - \frac{9}{25}\right) \\ &= \frac{3}{4} \times \frac{11}{25} \\ &= \frac{33}{100} \end{aligned}$$

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