

Order of Operations with Fractions (I)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

$$\frac{1}{8} + \frac{4}{5} \times \left(\frac{1}{4}\right)^2$$

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

$$\frac{8}{9} + \left(\frac{1}{4}\right)^2 \times \frac{2}{9}$$

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

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

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

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

$$\frac{5}{8} \div \frac{1}{5} + \left(\frac{1}{4}\right)^2$$

$$\frac{5}{8} + \left(\frac{1}{8}\right)^2 \div \frac{1}{4}$$

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$$\begin{aligned} & \frac{1}{8} + \frac{4}{5} \times \left(\frac{1}{4}\right)^2 \\ &= \frac{1}{8} + \frac{4}{5} \times \frac{1}{16} \\ &= \frac{1}{8} + \frac{1}{20} \\ &= \frac{7}{40} \end{aligned}$$

$$\begin{aligned} & \frac{1}{2} + \left(\frac{2}{9}\right)^2 \div \frac{1}{9} \\ &= \frac{1}{2} + \frac{4}{81} \div \frac{1}{9} \\ &= \frac{1}{2} + \frac{4}{9} \\ &= \frac{17}{18} \end{aligned}$$

$$\begin{aligned} & \frac{8}{9} + \left(\frac{1}{4}\right)^2 \times \frac{2}{9} \\ &= \frac{8}{9} + \frac{1}{16} \times \frac{2}{9} \\ &= \frac{8}{9} + \frac{1}{72} \\ &= \frac{65}{72} \end{aligned}$$

$$\begin{aligned} & \left(\frac{2}{5} - \frac{2}{9}\right) \times \left(\frac{5}{8}\right)^2 \\ &= \frac{8}{45} \times \left(\frac{5}{8}\right)^2 \\ &= \frac{8}{45} \times \frac{25}{64} \\ &= \frac{5}{72} \end{aligned}$$

$$\begin{aligned} & \left(\frac{2}{3}\right)^2 + \frac{1}{8} \div \frac{1}{5} \\ &= \frac{4}{9} + \frac{1}{8} \div \frac{1}{5} \\ &= \frac{4}{9} + \frac{5}{8} \\ &= \frac{77}{72} \\ &= 1\frac{5}{72} \end{aligned}$$

$$\begin{aligned} & \left(\frac{1}{4} - \frac{2}{9}\right) \div \left(\frac{1}{2}\right)^2 \\ &= \frac{1}{36} \div \left(\frac{1}{2}\right)^2 \\ &= \frac{1}{36} \div \frac{1}{4} \\ &= \frac{1}{9} \end{aligned}$$

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

$$\begin{aligned} & \frac{5}{8} \div \frac{1}{5} + \left(\frac{1}{4}\right)^2 \\ &= \frac{5}{8} \div \frac{1}{5} + \frac{1}{16} \\ &= \frac{25}{8} + \frac{1}{16} \\ &= \frac{51}{16} \\ &= 3\frac{3}{16} \end{aligned}$$

$$\begin{aligned} & \frac{5}{8} + \left(\frac{1}{8}\right)^2 \div \frac{1}{4} \\ &= \frac{5}{8} + \frac{1}{64} \div \frac{1}{4} \\ &= \frac{5}{8} + \frac{1}{16} \\ &= \frac{11}{16} \end{aligned}$$