

Order of Operations with Fractions (E)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

$$\frac{7}{8} + \frac{5}{8} \div \left(\frac{1}{4}\right)^2$$

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

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

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

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

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

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

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$$\begin{aligned} & \left(\frac{5}{8}\right)^2 \div \left(\frac{2}{3} - \frac{1}{6}\right) \\ &= \left(\frac{5}{8}\right)^2 \div \frac{1}{2} \\ &= \frac{25}{64} \div \frac{1}{2} \\ &= \frac{25}{32} \end{aligned}$$

$$\begin{aligned} & \frac{2}{3} - \frac{1}{5} \times \left(\frac{5}{6}\right)^2 \\ &= \frac{2}{3} - \frac{1}{5} \times \frac{25}{36} \\ &= \frac{2}{3} - \frac{5}{36} \\ &= \frac{19}{36} \end{aligned}$$

$$\begin{aligned} & \frac{7}{8} + \frac{5}{8} \div \left(\frac{1}{4}\right)^2 \\ &= \frac{7}{8} + \frac{5}{8} \div \frac{1}{16} \\ &= \frac{7}{8} + 10 \\ &= \frac{87}{8} \\ &= 10\frac{7}{8} \end{aligned}$$

$$\begin{aligned} & \left(\frac{3}{4}\right)^2 \times \frac{4}{5} + \frac{1}{4} \\ &= \frac{9}{16} \times \frac{4}{5} + \frac{1}{4} \\ &= \frac{9}{20} + \frac{1}{4} \\ &= \frac{7}{10} \end{aligned}$$

$$\begin{aligned} & \left(\frac{1}{9}\right)^2 \div \frac{1}{3} + \frac{2}{3} \\ &= \frac{1}{81} \div \frac{1}{3} + \frac{2}{3} \\ &= \frac{1}{27} + \frac{2}{3} \\ &= \frac{19}{27} \end{aligned}$$

$$\begin{aligned} & \left(\frac{1}{6} + \frac{1}{2}\right) \times \left(\frac{2}{3}\right)^3 \\ &= \frac{2}{3} \times \left(\frac{2}{3}\right)^3 \\ &= \frac{2}{3} \times \frac{8}{27} \\ &= \frac{16}{81} \end{aligned}$$

$$\begin{aligned} & \frac{5}{9} \times \left(\frac{1}{5}\right)^2 + \frac{3}{5} \\ &= \frac{5}{9} \times \frac{1}{25} + \frac{3}{5} \\ &= \frac{1}{45} + \frac{3}{5} \\ &= \frac{28}{45} \end{aligned}$$

$$\begin{aligned} & \left(\frac{2}{3} - \frac{1}{9}\right)^2 \times \frac{1}{5} \\ &= \left(\frac{5}{9}\right)^2 \times \frac{1}{5} \\ &= \frac{25}{81} \times \frac{1}{5} \\ &= \frac{5}{81} \end{aligned}$$

$$\begin{aligned} & \frac{2}{3} \div \frac{5}{9} - \left(\frac{1}{2}\right)^2 \\ &= \frac{2}{3} \div \frac{5}{9} - \frac{1}{4} \\ &= \frac{6}{5} - \frac{1}{4} \\ &= \frac{19}{20} \end{aligned}$$