

Order of Operations with Fractions (H)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

$$\left(\frac{2}{9} + \left(\frac{1}{6}\right)^2\right) \div \left(\frac{2}{5} \times \frac{3}{8}\right)$$

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

$$\left(\frac{5}{9} \div \frac{4}{9}\right) \times \frac{7}{8} + \left(\frac{1}{4}\right)^3$$

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$$\begin{aligned} & \left(\frac{2}{5} - \frac{1}{3} \times \frac{3}{5} \right) \div \left(\frac{1}{8} \right)^2 \\ &= \left(\frac{2}{5} - \frac{1}{5} \right) \div \left(\frac{1}{8} \right)^2 \\ &= \frac{1}{5} \div \left(\frac{1}{8} \right)^2 \\ &= \frac{1}{5} \div \frac{1}{64} \\ &= \frac{64}{5} \\ &= 12\frac{4}{5} \end{aligned}$$

$$\begin{aligned} & \left(\frac{2}{9} + \left(\frac{1}{6} \right)^2 \right) \div \left(\frac{2}{5} \times \frac{3}{8} \right) \\ &= \left(\frac{2}{9} + \frac{1}{36} \right) \div \left(\frac{2}{5} \times \frac{3}{8} \right) \\ &= \frac{1}{4} \div \left(\frac{2}{5} \times \frac{3}{8} \right) \\ &= \frac{1}{4} \div \frac{3}{20} \\ &= \frac{5}{3} \\ &= 1\frac{2}{3} \end{aligned}$$

$$\begin{aligned} & \frac{2}{3} \div \left(\frac{3}{8} + \left(\frac{3}{4} \right)^3 \times \frac{4}{9} \right) \\ &= \frac{2}{3} \div \left(\frac{3}{8} + \frac{27}{64} \times \frac{4}{9} \right) \\ &= \frac{2}{3} \div \left(\frac{3}{8} + \frac{3}{16} \right) \\ &= \frac{2}{3} \div \frac{9}{16} \\ &= \frac{32}{27} \\ &= 1\frac{5}{27} \end{aligned}$$

$$\begin{aligned} & \left(\frac{5}{9} \div \frac{4}{9} \right) \times \frac{7}{8} + \left(\frac{1}{4} \right)^3 \\ &= \frac{5}{4} \times \frac{7}{8} + \left(\frac{1}{4} \right)^3 \\ &= \frac{5}{4} \times \frac{7}{8} + \frac{1}{64} \\ &= \frac{35}{32} + \frac{1}{64} \\ &= \frac{71}{64} \\ &= 1\frac{7}{64} \end{aligned}$$