

# Order of Operations with Fractions (H)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Simplify each expression using the correct order of operations.

$$\frac{4}{9} \times \left( \frac{5}{9} - \left( \frac{1}{6} \right)^2 \right)$$

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

$$\left( \frac{3}{4} \right)^2 + \frac{7}{8} \times \frac{3}{5}$$

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

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

$$\left( \frac{3}{4} \right)^2 \div \left( \frac{1}{5} + \frac{3}{8} \right)$$

$$\frac{8}{9} \times \frac{1}{3} + \left( \frac{4}{9} \right)^2$$

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

$$\frac{3}{8} - \left( \frac{1}{3} \right)^3 \div \frac{1}{9}$$

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Simplify each expression using the correct order of operations.

$$\begin{aligned} & \frac{4}{9} \times \left( \frac{5}{9} - \left( \frac{1}{6} \right)^2 \right) \\ &= \frac{4}{9} \times \left( \frac{5}{9} - \frac{1}{36} \right) \\ &= \frac{4}{9} \times \frac{19}{36} \\ &= \frac{19}{81} \end{aligned}$$

$$\begin{aligned} & \frac{1}{8} \div \frac{5}{6} + \left( \frac{2}{5} \right)^2 \\ &= \frac{1}{8} \div \frac{5}{6} + \frac{4}{25} \\ &= \frac{3}{20} + \frac{4}{25} \\ &= \frac{31}{100} \end{aligned}$$

$$\begin{aligned} & \left( \frac{3}{4} \right)^2 + \frac{7}{8} \times \frac{3}{5} \\ &= \frac{9}{16} + \frac{7}{8} \times \frac{3}{5} \\ &= \frac{9}{16} + \frac{21}{40} \\ &= \frac{87}{80} \\ &= 1\frac{7}{80} \end{aligned}$$

$$\begin{aligned} & \frac{1}{3} \div \left( \frac{1}{4} + \left( \frac{5}{6} \right)^2 \right) \\ &= \frac{1}{3} \div \left( \frac{1}{4} + \frac{25}{36} \right) \\ &= \frac{1}{3} \div \frac{17}{18} \\ &= \frac{6}{17} \end{aligned}$$

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

$$\begin{aligned} & \left( \frac{3}{4} \right)^2 \div \left( \frac{1}{5} + \frac{3}{8} \right) \\ &= \left( \frac{3}{4} \right)^2 \div \frac{23}{40} \\ &= \frac{9}{16} \div \frac{23}{40} \\ &= \frac{45}{46} \end{aligned}$$

$$\begin{aligned} & \frac{8}{9} \times \frac{1}{3} + \left( \frac{4}{9} \right)^2 \\ &= \frac{8}{9} \times \frac{1}{3} + \frac{16}{81} \\ &= \frac{8}{27} + \frac{16}{81} \\ &= \frac{40}{81} \end{aligned}$$

$$\begin{aligned} & \frac{3}{8} \times \left( \frac{8}{9} + \left( \frac{2}{9} \right)^2 \right) \\ &= \frac{3}{8} \times \left( \frac{8}{9} + \frac{4}{81} \right) \\ &= \frac{3}{8} \times \frac{76}{81} \\ &= \frac{19}{54} \end{aligned}$$

$$\begin{aligned} & \frac{3}{8} - \left( \frac{1}{3} \right)^3 \div \frac{1}{9} \\ &= \frac{3}{8} - \frac{1}{27} \div \frac{1}{9} \\ &= \frac{3}{8} - \frac{1}{3} \\ &= \frac{1}{24} \end{aligned}$$