

# Order of Operations with Fractions (H)

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

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

Simplify each expression using the correct order of operations.

$$\frac{1}{2} \times \left( \frac{8}{9} - \frac{5}{9} + \frac{1}{4} \right)$$

$$\left( \frac{8}{9} - \frac{1}{2} \right) \div \frac{5}{6} + \frac{3}{4}$$

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

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

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

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

$$\frac{1}{3} \div \left( \frac{1}{6} + \frac{4}{5} \times \frac{1}{8} \right)$$

$$\frac{1}{5} \div \frac{8}{9} \times \left( \frac{5}{9} - \frac{1}{2} \right)$$

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

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Simplify each expression using the correct order of operations.

$$\begin{aligned} & \frac{1}{2} \times \left( \frac{8}{9} - \frac{5}{9} + \frac{1}{4} \right) \\ &= \frac{1}{2} \times \left( \frac{1}{3} + \frac{1}{4} \right) \\ &= \frac{1}{2} \times \frac{7}{12} \\ &= \frac{7}{24} \end{aligned}$$

$$\begin{aligned} & \left( \frac{8}{9} - \frac{1}{2} \right) \div \frac{5}{6} + \frac{3}{4} \\ &= \frac{7}{18} \div \frac{5}{6} + \frac{3}{4} \\ &= \frac{7}{15} + \frac{3}{4} \\ &= \frac{73}{60} \\ &= 1\frac{13}{60} \end{aligned}$$

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

$$\begin{aligned} & \frac{3}{5} \times \left( \frac{5}{8} + \frac{5}{9} \right) \div \frac{2}{3} \\ &= \frac{3}{5} \times \frac{85}{72} \div \frac{2}{3} \\ &= \frac{17}{24} \div \frac{2}{3} \\ &= \frac{17}{16} \\ &= 1\frac{1}{16} \end{aligned}$$

$$\begin{aligned} & \frac{1}{6} \times \left( \frac{1}{3} + \frac{3}{4} \right) \div \frac{5}{6} \\ &= \frac{1}{6} \times \frac{13}{12} \div \frac{5}{6} \\ &= \frac{13}{72} \div \frac{5}{6} \\ &= \frac{13}{60} \end{aligned}$$

$$\begin{aligned} & \frac{5}{9} - \frac{1}{6} \div \left( \frac{1}{8} + \frac{2}{5} \right) \\ &= \frac{5}{9} - \frac{1}{6} \div \frac{21}{40} \\ &= \frac{5}{9} - \frac{20}{63} \\ &= \frac{5}{21} \end{aligned}$$

$$\begin{aligned} & \frac{1}{3} \div \left( \frac{1}{6} + \frac{4}{5} \times \frac{1}{8} \right) \\ &= \frac{1}{3} \div \left( \frac{1}{6} + \frac{1}{10} \right) \\ &= \frac{1}{3} \div \frac{4}{15} \\ &= \frac{5}{4} \\ &= 1\frac{1}{4} \end{aligned}$$

$$\begin{aligned} & \frac{1}{5} \div \frac{8}{9} \times \left( \frac{5}{9} - \frac{1}{2} \right) \\ &= \frac{1}{5} \div \frac{8}{9} \times \frac{1}{18} \\ &= \frac{9}{40} \times \frac{1}{18} \\ &= \frac{1}{80} \end{aligned}$$

$$\begin{aligned} & \frac{1}{4} \div \left( \frac{1}{8} + \frac{7}{8} \times \frac{2}{5} \right) \\ &= \frac{1}{4} \div \left( \frac{1}{8} + \frac{7}{20} \right) \\ &= \frac{1}{4} \div \frac{19}{40} \\ &= \frac{10}{19} \end{aligned}$$