

# Order of Operations with Fractions (A)

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

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

Simplify each expression using the correct order of operations.

$$\left(\frac{1}{9} \times \frac{3}{5}\right) \div \left(\frac{7}{9} + \frac{1}{8} - \frac{3}{4}\right) \times \left(\frac{3}{8} + \frac{1}{6}\right)$$

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

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

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

# Order of Operations with Fractions (A)

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

Simplify each expression using the correct order of operations.

$$\begin{aligned} & \left( \frac{1}{9} \times \frac{3}{5} \right) \div \left( \frac{7}{9} + \frac{1}{8} - \frac{3}{4} \right) \times \left( \frac{3}{8} + \frac{1}{6} \right) \\ &= \frac{1}{15} \div \left( \frac{7}{9} + \frac{1}{8} - \frac{3}{4} \right) \times \left( \frac{3}{8} + \frac{1}{6} \right) \\ &= \frac{1}{15} \div \left( \frac{65}{72} - \frac{3}{4} \right) \times \left( \frac{3}{8} + \frac{1}{6} \right) \\ &= \frac{1}{15} \div \frac{11}{72} \times \left( \frac{3}{8} + \frac{1}{6} \right) \\ &= \frac{1}{15} \div \frac{11}{72} \times \frac{13}{24} \\ &= \frac{24}{55} \times \frac{13}{24} \\ &= \frac{13}{55} \end{aligned}$$

$$\begin{aligned} & \left( \left( \frac{1}{4} + \frac{1}{2} \right) \div \frac{4}{5} \right) \times \frac{8}{9} - \frac{5}{6} + \frac{1}{5} \times \frac{3}{8} \\ &= \left( \frac{3}{4} \div \frac{4}{5} \right) \times \frac{8}{9} - \frac{5}{6} + \frac{1}{5} \times \frac{3}{8} \\ &= \frac{15}{16} \times \frac{8}{9} - \frac{5}{6} + \frac{1}{5} \times \frac{3}{8} \\ &= \frac{5}{6} - \frac{5}{6} + \frac{1}{5} \times \frac{3}{8} \\ &= \frac{5}{6} - \frac{5}{6} + \frac{3}{40} \\ &= 0 + \frac{3}{40} \\ &= \frac{3}{40} \end{aligned}$$

$$\begin{aligned} & \left( \frac{2}{3} \div \frac{8}{9} \right) \times \left( \frac{4}{5} + \frac{2}{5} - \frac{1}{5} \right) \times \left( \frac{1}{9} \div \frac{3}{5} \right) \\ &= \frac{3}{4} \times \left( \frac{4}{5} + \frac{2}{5} - \frac{1}{5} \right) \times \left( \frac{1}{9} \div \frac{3}{5} \right) \\ &= \frac{3}{4} \times \left( \frac{6}{5} - \frac{1}{5} \right) \times \left( \frac{1}{9} \div \frac{3}{5} \right) \\ &= \frac{3}{4} \times 1 \times \left( \frac{1}{9} \div \frac{3}{5} \right) \\ &= \frac{3}{4} \times 1 \times \frac{5}{27} \\ &= \frac{3}{4} \times \frac{5}{27} \\ &= \frac{5}{36} \end{aligned}$$

$$\begin{aligned} & \frac{3}{5} + \frac{3}{4} \times \left( \frac{4}{5} - \frac{1}{5} \right) \div \frac{1}{6} \div \left( \frac{1}{2} \times \frac{1}{3} \right) \\ &= \frac{3}{5} + \frac{3}{4} \times \frac{3}{5} \div \frac{1}{6} \div \left( \frac{1}{2} \times \frac{1}{3} \right) \\ &= \frac{3}{5} + \frac{3}{4} \times \frac{3}{5} \div \frac{1}{6} \div \frac{1}{6} \\ &= \frac{3}{5} + \frac{9}{20} \div \frac{1}{6} \div \frac{1}{6} \\ &= \frac{3}{5} + \frac{27}{10} \div \frac{1}{6} \\ &= \frac{3}{5} + \frac{81}{5} \\ &= \frac{84}{5} \\ &= 16\frac{4}{5} \end{aligned}$$