

Order of Operations with Fractions (A)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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

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

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

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

Order of Operations with Fractions (B)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

$$\left(\frac{2}{5} \div \frac{7}{9}\right) \times \left(\frac{1}{3} + \frac{5}{8} - \frac{8}{9} + \frac{4}{9} - \frac{3}{8}\right)$$

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

$$\frac{8}{9} \times \left(\frac{1}{6} + \frac{7}{8} - \frac{3}{4}\right) \div \left(\frac{5}{6} \div \left(\frac{2}{5} + \frac{1}{5}\right)\right)$$

Order of Operations with Fractions (B)

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Simplify each expression using the correct order of operations.

$$\begin{aligned} & \left(\frac{1}{4} \times \frac{2}{3}\right) \div \left(\frac{1}{2} - \frac{2}{5} + \frac{1}{9} + \frac{1}{3}\right) \div \frac{3}{5} \\ &= \frac{1}{6} \div \left(\frac{1}{2} - \frac{2}{5} + \frac{1}{9} + \frac{1}{3}\right) \div \frac{3}{5} \\ &= \frac{1}{6} \div \left(\frac{1}{10} + \frac{1}{9} + \frac{1}{3}\right) \div \frac{3}{5} \\ &= \frac{1}{6} \div \left(\frac{19}{90} + \frac{1}{3}\right) \div \frac{3}{5} \\ &= \frac{1}{6} \div \frac{49}{90} \div \frac{3}{5} \\ &= \frac{15}{49} \div \frac{3}{5} \\ &= \frac{25}{49} \end{aligned}$$

$$\begin{aligned} & \left(\frac{2}{5} \div \frac{7}{9}\right) \times \left(\frac{1}{3} + \frac{5}{8} - \frac{8}{9} + \frac{4}{9} - \frac{3}{8}\right) \\ &= \frac{18}{35} \times \left(\frac{1}{3} + \frac{5}{8} - \frac{8}{9} + \frac{4}{9} - \frac{3}{8}\right) \\ &= \frac{18}{35} \times \left(\frac{23}{24} - \frac{8}{9} + \frac{4}{9} - \frac{3}{8}\right) \\ &= \frac{18}{35} \times \left(\frac{5}{72} + \frac{4}{9} - \frac{3}{8}\right) \\ &= \frac{18}{35} \times \left(\frac{37}{72} - \frac{3}{8}\right) \\ &= \frac{18}{35} \times \frac{5}{36} \\ &= \frac{1}{14} \end{aligned}$$

$$\begin{aligned} & \left(\frac{2}{5} \div \left(\frac{1}{4} - \frac{1}{6}\right)\right) \times \frac{3}{8} + \frac{1}{3} \times \frac{1}{5} + \frac{1}{9} \\ &= \left(\frac{2}{5} \div \frac{1}{12}\right) \times \frac{3}{8} + \frac{1}{3} \times \frac{1}{5} + \frac{1}{9} \\ &= \frac{24}{5} \times \frac{3}{8} + \frac{1}{3} \times \frac{1}{5} + \frac{1}{9} \\ &= \frac{9}{5} + \frac{1}{3} \times \frac{1}{5} + \frac{1}{9} \\ &= \frac{9}{5} + \frac{1}{15} + \frac{1}{9} \\ &= \frac{28}{15} + \frac{1}{9} \\ &= \frac{89}{45} \\ &= 1\frac{44}{45} \end{aligned}$$

$$\begin{aligned} & \frac{8}{9} \times \left(\frac{1}{6} + \frac{7}{8} - \frac{3}{4}\right) \div \left(\frac{5}{6} \div \left(\frac{2}{5} + \frac{1}{5}\right)\right) \\ &= \frac{8}{9} \times \left(\frac{25}{24} - \frac{3}{4}\right) \div \left(\frac{5}{6} \div \left(\frac{2}{5} + \frac{1}{5}\right)\right) \\ &= \frac{8}{9} \times \frac{7}{24} \div \left(\frac{5}{6} \div \left(\frac{2}{5} + \frac{1}{5}\right)\right) \\ &= \frac{8}{9} \times \frac{7}{24} \div \left(\frac{5}{6} \div \frac{3}{5}\right) \\ &= \frac{8}{9} \times \frac{7}{24} \div \frac{25}{18} \\ &= \frac{7}{27} \div \frac{25}{18} \\ &= \frac{14}{75} \end{aligned}$$

Order of Operations with Fractions (C)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

Order of Operations with Fractions (C)

Name: _____

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Simplify each expression using the correct order of operations.

$$\begin{aligned}
 & \frac{4}{5} - \frac{2}{9} \div \left(\frac{1}{6} + \frac{2}{3} \right) \times \left(\frac{1}{5} + \frac{1}{2} \right) \div \frac{8}{9} \\
 &= \frac{4}{5} - \frac{2}{9} \div \frac{5}{6} \times \left(\frac{1}{5} + \frac{1}{2} \right) \div \frac{8}{9} \\
 &= \frac{4}{5} - \frac{2}{9} \div \frac{5}{6} \times \frac{7}{10} \div \frac{8}{9} \\
 &= \frac{4}{5} - \frac{4}{15} \times \frac{7}{10} \div \frac{8}{9} \\
 &= \frac{4}{5} - \frac{14}{75} \div \frac{8}{9} \\
 &= \frac{4}{5} - \frac{21}{100} \\
 &= \frac{59}{100}
 \end{aligned}$$

$$\begin{aligned}
 & \left(\frac{4}{5} \div \frac{3}{5} \right) \times \left(\left(\frac{5}{8} - \frac{3}{8} + \frac{1}{3} + \frac{1}{6} \right) \times \frac{7}{8} \right) \\
 &= \frac{4}{3} \times \left(\left(\frac{5}{8} - \frac{3}{8} + \frac{1}{3} + \frac{1}{6} \right) \times \frac{7}{8} \right) \\
 &= \frac{4}{3} \times \left(\left(\frac{1}{4} + \frac{1}{3} + \frac{1}{6} \right) \times \frac{7}{8} \right) \\
 &= \frac{4}{3} \times \left(\left(\frac{7}{12} + \frac{1}{6} \right) \times \frac{7}{8} \right) \\
 &= \frac{4}{3} \times \left(\frac{3}{4} \times \frac{7}{8} \right) \\
 &= \frac{4}{3} \times \frac{21}{32} \\
 &= \frac{7}{8}
 \end{aligned}$$

$$\begin{aligned}
 & \left(\frac{1}{9} \div \frac{3}{4} \right) \times \left(\frac{4}{9} - \frac{1}{8} + \frac{3}{8} - \frac{1}{6} + \frac{5}{9} \right) \\
 &= \frac{4}{27} \times \left(\frac{4}{9} - \frac{1}{8} + \frac{3}{8} - \frac{1}{6} + \frac{5}{9} \right) \\
 &= \frac{4}{27} \times \left(\frac{23}{72} + \frac{3}{8} - \frac{1}{6} + \frac{5}{9} \right) \\
 &= \frac{4}{27} \times \left(\frac{25}{36} - \frac{1}{6} + \frac{5}{9} \right) \\
 &= \frac{4}{27} \times \left(\frac{19}{36} + \frac{5}{9} \right) \\
 &= \frac{4}{27} \times \frac{13}{12} \\
 &= \frac{13}{81}
 \end{aligned}$$

$$\begin{aligned}
 & \left(\frac{1}{6} \div \frac{1}{4} \right) \times \left(\frac{1}{8} + \frac{5}{8} - \frac{3}{4} \right) \div \left(\frac{3}{5} + \frac{7}{8} \right) \\
 &= \frac{2}{3} \times \left(\frac{1}{8} + \frac{5}{8} - \frac{3}{4} \right) \div \left(\frac{3}{5} + \frac{7}{8} \right) \\
 &= \frac{2}{3} \times \left(\frac{3}{4} - \frac{3}{4} \right) \div \left(\frac{3}{5} + \frac{7}{8} \right) \\
 &= \frac{2}{3} \times 0 \div \left(\frac{3}{5} + \frac{7}{8} \right) \\
 &= \frac{2}{3} \times 0 \div \frac{59}{40} \\
 &= 0 \div \frac{59}{40} \\
 &= 0
 \end{aligned}$$

Order of Operations with Fractions (D)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

$$\frac{5}{8} \times \frac{4}{5} - \frac{2}{9} + \frac{3}{4} \div \left(\frac{2}{5} \div \left(\frac{7}{9} \times \frac{3}{5}\right)\right)$$

$$\frac{1}{9} \times \frac{1}{2} + \frac{7}{9} - \frac{2}{3} \div \left(\left(\frac{5}{6} + \frac{1}{6}\right) \div \frac{5}{9}\right)$$

$$\frac{3}{5} - \frac{2}{9} \times \left(\frac{5}{8} + \frac{1}{8}\right) \div \frac{2}{5} \div \left(\frac{7}{8} - \frac{1}{6}\right)$$

Order of Operations with Fractions (D)

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Simplify each expression using the correct order of operations.

$$\begin{aligned} & \frac{1}{6} + \frac{8}{9} \times \left(\frac{3}{8} - \frac{1}{8} \right) \div \frac{1}{4} \div \left(\frac{4}{5} + \frac{1}{5} \right) \\ &= \frac{1}{6} + \frac{8}{9} \times \frac{1}{4} \div \frac{1}{4} \div \left(\frac{4}{5} + \frac{1}{5} \right) \\ &= \frac{1}{6} + \frac{8}{9} \times \frac{1}{4} \div \frac{1}{4} \div 1 \\ &= \frac{1}{6} + \frac{2}{9} \div \frac{1}{4} \div 1 \\ &= \frac{1}{6} + \frac{8}{9} \div 1 \\ &= \frac{1}{6} + \frac{8}{9} \\ &= \frac{19}{18} \\ &= 1\frac{1}{18} \end{aligned}$$

$$\begin{aligned} & \frac{5}{8} \times \frac{4}{5} - \frac{2}{9} + \frac{3}{4} \div \left(\frac{2}{5} \div \left(\frac{7}{9} \times \frac{3}{5} \right) \right) \\ &= \frac{5}{8} \times \frac{4}{5} - \frac{2}{9} + \frac{3}{4} \div \left(\frac{2}{5} \div \frac{7}{15} \right) \\ &= \frac{5}{8} \times \frac{4}{5} - \frac{2}{9} + \frac{3}{4} \div \frac{6}{7} \\ &= \frac{1}{2} - \frac{2}{9} + \frac{3}{4} \div \frac{6}{7} \\ &= \frac{1}{2} - \frac{2}{9} + \frac{7}{8} \\ &= \frac{5}{18} + \frac{7}{8} \\ &= \frac{83}{72} \\ &= 1\frac{11}{72} \end{aligned}$$

$$\begin{aligned} & \frac{1}{9} \times \frac{1}{2} + \frac{7}{9} - \frac{2}{3} \div \left(\left(\frac{5}{6} + \frac{1}{6} \right) \div \frac{5}{9} \right) \\ &= \frac{1}{9} \times \frac{1}{2} + \frac{7}{9} - \frac{2}{3} \div \left(\frac{1}{1} \div \frac{5}{9} \right) \\ &= \frac{1}{9} \times \frac{1}{2} + \frac{7}{9} - \frac{2}{3} \div \frac{9}{5} \\ &= \frac{1}{18} + \frac{7}{9} - \frac{2}{3} \div \frac{9}{5} \\ &= \frac{1}{18} + \frac{7}{9} - \frac{10}{27} \\ &= \frac{5}{6} - \frac{10}{27} \\ &= \frac{25}{54} \end{aligned}$$

$$\begin{aligned} & \frac{3}{5} - \frac{2}{9} \times \left(\frac{5}{8} + \frac{1}{8} \right) \div \frac{2}{5} \div \left(\frac{7}{8} - \frac{1}{6} \right) \\ &= \frac{3}{5} - \frac{2}{9} \times \frac{3}{4} \div \frac{2}{5} \div \left(\frac{7}{8} - \frac{1}{6} \right) \\ &= \frac{3}{5} - \frac{2}{9} \times \frac{3}{4} \div \frac{2}{5} \div \frac{17}{24} \\ &= \frac{3}{5} - \frac{1}{6} \div \frac{2}{5} \div \frac{17}{24} \\ &= \frac{3}{5} - \frac{5}{12} \div \frac{17}{24} \\ &= \frac{3}{5} - \frac{10}{17} \\ &= \frac{1}{85} \end{aligned}$$

Order of Operations with Fractions (E)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

$$\frac{5}{8} \times \frac{7}{9} - \frac{1}{8} + \frac{1}{9} \div \left(\left(\frac{1}{2} \times \frac{2}{5} \right) \div \frac{1}{4} \right)$$

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

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

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

Order of Operations with Fractions (E)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

$$\begin{aligned}
 & \frac{5}{8} \times \frac{7}{9} - \frac{1}{8} + \frac{1}{9} \div \left(\left(\frac{1}{2} \times \frac{2}{5} \right) \div \frac{1}{4} \right) \\
 &= \frac{5}{8} \times \frac{7}{9} - \frac{1}{8} + \frac{1}{9} \div \left(\frac{1}{5} \div \frac{1}{4} \right) \\
 &= \frac{5}{8} \times \frac{7}{9} - \frac{1}{8} + \frac{1}{9} \div \frac{4}{5} \\
 &= \frac{35}{72} - \frac{1}{8} + \frac{1}{9} \div \frac{4}{5} \\
 &= \frac{35}{72} - \frac{1}{8} + \frac{5}{36} \\
 &= \frac{13}{36} + \frac{5}{36} \\
 &= \frac{1}{2}
 \end{aligned}$$

$$\begin{aligned}
 & \left(\frac{5}{9} + \frac{4}{9} \right) \div \frac{1}{2} \times \left(\left(\frac{3}{4} - \frac{1}{5} \right) \div \frac{1}{4} \right) \times \frac{5}{6} \\
 &= 1 \div \frac{1}{2} \times \left(\left(\frac{3}{4} - \frac{1}{5} \right) \div \frac{1}{4} \right) \times \frac{5}{6} \\
 &= 1 \div \frac{1}{2} \times \left(\frac{11}{20} \div \frac{1}{4} \right) \times \frac{5}{6} \\
 &= \frac{1 \div \frac{1}{2}}{2} \times \frac{11}{5} \times \frac{5}{6} \\
 &= \frac{2 \times 11}{5} \times \frac{5}{6} \\
 &= \frac{22}{5} \times \frac{5}{6} \\
 &= \frac{11}{3} \\
 &= 3\frac{2}{3}
 \end{aligned}$$

$$\begin{aligned}
 & \left(\left(\frac{7}{9} - \frac{1}{9} \right) \times \frac{5}{8} \right) \div \frac{3}{4} + \frac{3}{8} \times \frac{4}{9} \div \frac{4}{5} \\
 &= \left(\frac{2}{3} \times \frac{5}{8} \right) \div \frac{3}{4} + \frac{3}{8} \times \frac{4}{9} \div \frac{4}{5} \\
 &= \frac{5}{12} \div \frac{3}{4} + \frac{3}{8} \times \frac{4}{9} \div \frac{4}{5} \\
 &= \frac{5}{9} + \frac{3}{8} \times \frac{4}{9} \div \frac{4}{5} \\
 &= \frac{5}{9} + \frac{1}{6} \div \frac{4}{5} \\
 &= \frac{5}{9} + \frac{5}{24} \\
 &= \frac{55}{72}
 \end{aligned}$$

$$\begin{aligned}
 & \left(\frac{1}{9} \div \frac{5}{6} \right) \times \left(\frac{4}{9} + \frac{1}{4} - \frac{5}{9} \right) \times \left(\frac{3}{4} \div \frac{8}{9} \right) \\
 &= \frac{2}{15} \times \left(\frac{4}{9} + \frac{1}{4} - \frac{5}{9} \right) \times \left(\frac{3}{4} \div \frac{8}{9} \right) \\
 &= \frac{2}{15} \times \left(\frac{25}{36} - \frac{5}{9} \right) \times \left(\frac{3}{4} \div \frac{8}{9} \right) \\
 &= \frac{2}{15} \times \frac{5}{36} \times \left(\frac{3}{4} \div \frac{8}{9} \right) \\
 &= \frac{2}{15} \times \frac{5}{36} \times \frac{27}{32} \\
 &= \frac{1}{54} \times \frac{27}{32} \\
 &= \frac{1}{64}
 \end{aligned}$$

Order of Operations with Fractions (F)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

$$\frac{5}{9} \div \frac{2}{3} + \frac{1}{2} - \frac{7}{9} \times \left(\left(\frac{3}{8} - \frac{1}{6}\right) \div \frac{7}{8}\right)$$

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

$$\frac{7}{8} \div \left(\frac{8}{9} - \frac{7}{9} + \frac{1}{5}\right) \times \left(\frac{5}{6} \times \left(\frac{4}{9} \div \frac{1}{2}\right)\right)$$

Order of Operations with Fractions (F)

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Simplify each expression using the correct order of operations.

$$\begin{aligned} & \left(\frac{1}{2} \div \frac{5}{8}\right) \times \left(\frac{2}{3} + \frac{3}{5} - \frac{1}{9} - \frac{5}{9}\right) \div \frac{3}{8} \\ &= \frac{4}{5} \times \left(\frac{2}{3} + \frac{3}{5} - \frac{1}{9} - \frac{5}{9}\right) \div \frac{3}{8} \\ &= \frac{4}{5} \times \left(\frac{19}{15} - \frac{1}{9} - \frac{5}{9}\right) \div \frac{3}{8} \\ &= \frac{4}{5} \times \left(\frac{52}{45} - \frac{5}{9}\right) \div \frac{3}{8} \\ &= \frac{4}{5} \times \frac{3}{5} \div \frac{3}{8} \\ &= \frac{12}{25} \div \frac{3}{8} \\ &= \frac{32}{25} \\ &= 1\frac{7}{25} \end{aligned}$$

$$\begin{aligned} & \frac{5}{9} \div \frac{2}{3} + \frac{1}{2} - \frac{7}{9} \times \left(\left(\frac{3}{8} - \frac{1}{6}\right) \div \frac{7}{8}\right) \\ &= \frac{5}{9} \div \frac{2}{3} + \frac{1}{2} - \frac{7}{9} \times \left(\frac{5}{24} \div \frac{7}{8}\right) \\ &= \frac{5}{9} \div \frac{2}{3} + \frac{1}{2} - \frac{7}{9} \times \frac{5}{21} \\ &= \frac{5}{6} + \frac{1}{2} - \frac{7}{9} \times \frac{5}{21} \\ &= \frac{5}{6} + \frac{1}{2} - \frac{5}{27} \\ &= \frac{4}{3} - \frac{5}{27} \\ &= \frac{31}{27} \\ &= 1\frac{4}{27} \end{aligned}$$

$$\begin{aligned} & \frac{1}{2} - \frac{4}{9} + \frac{3}{8} \times \left(\left(\frac{8}{9} \div \frac{2}{9}\right) \times \left(\frac{3}{5} + \frac{2}{5}\right)\right) \\ &= \frac{1}{2} - \frac{4}{9} + \frac{3}{8} \times \left(4 \times \left(\frac{3}{5} + \frac{2}{5}\right)\right) \\ &= \frac{1}{2} - \frac{4}{9} + \frac{3}{8} \times (4 \times 1) \\ &= \frac{1}{2} - \frac{4}{9} + \frac{3}{8} \times 4 \\ &= \frac{1}{2} - \frac{4}{9} + \frac{3}{2} \\ &= \frac{1}{18} + \frac{3}{2} \\ &= \frac{14}{9} \\ &= 1\frac{5}{9} \end{aligned}$$

$$\begin{aligned} & \frac{7}{8} \div \left(\frac{8}{9} - \frac{7}{9} + \frac{1}{5}\right) \times \left(\frac{5}{6} \times \left(\frac{4}{9} \div \frac{1}{2}\right)\right) \\ &= \frac{7}{8} \div \left(\frac{1}{9} + \frac{1}{5}\right) \times \left(\frac{5}{6} \times \left(\frac{4}{9} \div \frac{1}{2}\right)\right) \\ &= \frac{7}{8} \div \frac{14}{45} \times \left(\frac{5}{6} \times \left(\frac{4}{9} \div \frac{1}{2}\right)\right) \\ &= \frac{7}{8} \div \frac{14}{45} \times \left(\frac{5}{6} \times \frac{8}{9}\right) \\ &= \frac{7}{8} \div \frac{14}{45} \times \frac{20}{27} \\ &= \frac{45}{16} \times \frac{20}{27} \\ &= \frac{25}{12} \\ &= 2\frac{1}{12} \end{aligned}$$

Order of Operations with Fractions (G)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

$$\left(\frac{1}{8} \div \frac{3}{4}\right) \times \left(\frac{2}{3} + \frac{1}{3} - \frac{1}{6} - \frac{5}{6}\right) \div \frac{7}{8}$$

$$\left(\left(\frac{1}{3} + \frac{3}{4}\right) \div \frac{2}{9}\right) \times \frac{7}{9} - \frac{7}{8} + \frac{1}{6} \div \frac{2}{3}$$

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

Order of Operations with Fractions (G)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

$$\begin{aligned} & \left(\frac{1}{8} \div \frac{3}{4} \right) \times \left(\frac{2}{3} + \frac{1}{3} - \frac{1}{6} - \frac{5}{6} \right) \div \frac{7}{8} \\ & = \frac{1}{6} \times \left(\frac{2}{3} + \frac{1}{3} - \frac{1}{6} - \frac{5}{6} \right) \div \frac{7}{8} \\ & = \frac{1}{6} \times \left(1 - \frac{1}{6} - \frac{5}{6} \right) \div \frac{7}{8} \\ & = \frac{1}{6} \times \left(\frac{5}{6} - \frac{5}{6} \right) \div \frac{7}{8} \\ & = \frac{1}{6} \times 0 \div \frac{7}{8} \\ & = 0 \div \frac{7}{8} \\ & = 0 \end{aligned}$$

$$\begin{aligned} & \left(\left(\frac{1}{3} + \frac{3}{4} \right) \div \frac{2}{9} \right) \times \frac{7}{9} - \frac{7}{8} + \frac{1}{6} \div \frac{2}{3} \\ & = \left(\frac{13}{12} \div \frac{2}{9} \right) \times \frac{7}{9} - \frac{7}{8} + \frac{1}{6} \div \frac{2}{3} \\ & = \frac{39}{8} \times \frac{7}{9} - \frac{7}{8} + \frac{1}{6} \div \frac{2}{3} \\ & = \frac{91}{24} - \frac{7}{8} + \frac{1}{6} \div \frac{2}{3} \\ & = \frac{91}{24} - \frac{7}{8} + \frac{1}{4} \\ & = \frac{35}{12} + \frac{1}{4} \\ & = \frac{19}{6} \\ & = 3\frac{1}{6} \end{aligned}$$

$$\begin{aligned} & \left(\frac{5}{8} \times \frac{1}{5} \right) \div \left(\frac{4}{9} + \frac{5}{9} - \frac{1}{6} - \frac{1}{3} + \frac{1}{9} \right) \\ & = \frac{1}{8} \div \left(\frac{4}{9} + \frac{5}{9} - \frac{1}{6} - \frac{1}{3} + \frac{1}{9} \right) \\ & = \frac{1}{8} \div \left(1 - \frac{1}{6} - \frac{1}{3} + \frac{1}{9} \right) \\ & = \frac{1}{8} \div \left(\frac{5}{6} - \frac{1}{3} + \frac{1}{9} \right) \\ & = \frac{1}{8} \div \left(\frac{1}{2} + \frac{1}{9} \right) \\ & = \frac{1}{8} \div \frac{11}{18} \\ & = \frac{9}{44} \end{aligned}$$

Order of Operations with Fractions (H)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

Order of Operations with Fractions (H)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

$$\begin{aligned} & \left(\frac{1}{3} \times \frac{5}{8}\right) \div \left(\frac{1}{9} + \frac{1}{2} - \frac{1}{8}\right) \times \left(\frac{3}{5} \div \frac{4}{5}\right) \\ &= \frac{5}{24} \div \left(\frac{1}{9} + \frac{1}{2} - \frac{1}{8}\right) \times \left(\frac{3}{5} \div \frac{4}{5}\right) \\ &= \frac{5}{24} \div \left(\frac{11}{18} - \frac{1}{8}\right) \times \left(\frac{3}{5} \div \frac{4}{5}\right) \\ &= \frac{5}{24} \div \frac{35}{72} \times \left(\frac{3}{5} \div \frac{4}{5}\right) \\ &= \frac{5}{24} \div \frac{35}{72} \times \frac{3}{4} \\ &= \frac{3}{7} \times \frac{3}{4} \\ &= \frac{9}{28} \end{aligned}$$

$$\begin{aligned} & \left(\frac{5}{8} \div \frac{1}{4}\right) \times \left(\frac{3}{5} - \frac{1}{9} + \frac{2}{3} + \frac{4}{5} - \frac{2}{5}\right) \\ &= \frac{5}{2} \times \left(\frac{3}{5} - \frac{1}{9} + \frac{2}{3} + \frac{4}{5} - \frac{2}{5}\right) \\ &= \frac{5}{2} \times \left(\frac{22}{45} + \frac{2}{3} + \frac{4}{5} - \frac{2}{5}\right) \\ &= \frac{5}{2} \times \left(\frac{52}{45} + \frac{4}{5} - \frac{2}{5}\right) \\ &= \frac{5}{2} \times \left(\frac{88}{45} - \frac{2}{5}\right) \\ &= \frac{5}{2} \times \frac{14}{9} \\ &= \frac{35}{9} \\ &= 3\frac{8}{9} \end{aligned}$$

$$\begin{aligned} & \frac{1}{5} \div \left(\frac{1}{3} - \frac{1}{4} + \frac{5}{8}\right) \times \left(\frac{3}{4} \times \left(\frac{4}{9} - \frac{2}{9}\right)\right) \\ &= \frac{1}{5} \div \left(\frac{1}{12} + \frac{5}{8}\right) \times \left(\frac{3}{4} \times \left(\frac{4}{9} - \frac{2}{9}\right)\right) \\ &= \frac{1}{5} \div \frac{17}{24} \times \left(\frac{3}{4} \times \left(\frac{4}{9} - \frac{2}{9}\right)\right) \\ &= \frac{1}{5} \div \frac{17}{24} \times \left(\frac{3}{4} \times \frac{2}{9}\right) \\ &= \frac{1}{5} \div \frac{17}{24} \times \frac{1}{6} \\ &= \frac{24}{85} \times \frac{1}{6} \\ &= \frac{4}{85} \end{aligned}$$

$$\begin{aligned} & \left(\frac{1}{2} \div \frac{1}{3}\right) \times \left(\frac{2}{3} - \frac{4}{9} + \frac{3}{4} - \frac{1}{9} + \frac{8}{9}\right) \\ &= \frac{3}{2} \times \left(\frac{2}{3} - \frac{4}{9} + \frac{3}{4} - \frac{1}{9} + \frac{8}{9}\right) \\ &= \frac{3}{2} \times \left(\frac{2}{9} + \frac{3}{4} - \frac{1}{9} + \frac{8}{9}\right) \\ &= \frac{3}{2} \times \left(\frac{35}{36} - \frac{1}{9} + \frac{8}{9}\right) \\ &= \frac{3}{2} \times \left(\frac{31}{36} + \frac{8}{9}\right) \\ &= \frac{3}{2} \times \frac{7}{4} \\ &= \frac{21}{8} \\ &= 2\frac{5}{8} \end{aligned}$$

Order of Operations with Fractions (I)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

Order of Operations with Fractions (I)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

$$\begin{aligned} & \left(\left(\frac{5}{6} - \frac{2}{9} \right) \times \frac{1}{3} \right) \div \left(\frac{2}{5} + \frac{1}{2} - \frac{4}{5} \right) \times \frac{3}{8} \\ &= \left(\frac{11}{18} \times \frac{1}{3} \right) \div \left(\frac{2}{5} + \frac{1}{2} - \frac{4}{5} \right) \times \frac{3}{8} \\ &= \frac{11}{54} \div \left(\frac{2}{5} + \frac{1}{2} - \frac{4}{5} \right) \times \frac{3}{8} \\ &= \frac{11}{54} \div \left(\frac{9}{10} - \frac{4}{5} \right) \times \frac{3}{8} \\ &= \frac{11}{54} \div \frac{1}{10} \times \frac{3}{8} \\ &= \frac{55}{27} \times \frac{3}{8} \\ &= \frac{55}{72} \end{aligned}$$

$$\begin{aligned} & \left(\frac{3}{4} \div \frac{2}{9} \right) \times \left(\frac{1}{8} + \frac{5}{8} - \frac{1}{4} - \frac{1}{2} + \frac{8}{9} \right) \\ &= \frac{27}{8} \times \left(\frac{1}{8} + \frac{5}{8} - \frac{1}{4} - \frac{1}{2} + \frac{8}{9} \right) \\ &= \frac{27}{8} \times \left(\frac{3}{4} - \frac{1}{4} - \frac{1}{2} + \frac{8}{9} \right) \\ &= \frac{27}{8} \times \left(\frac{1}{2} - \frac{1}{2} + \frac{8}{9} \right) \\ &= \frac{27}{8} \times \left(0 + \frac{8}{9} \right) \\ &= \frac{27}{8} \times \frac{8}{9} \\ &= 3 \end{aligned}$$

$$\begin{aligned} & \left(\frac{7}{8} - \frac{1}{9} \right) \times \left(\frac{1}{3} + \frac{1}{5} \right) \div \frac{3}{4} + \frac{4}{9} - \frac{5}{9} \\ &= \frac{55}{72} \times \left(\frac{1}{3} + \frac{1}{5} \right) \div \frac{3}{4} + \frac{4}{9} - \frac{5}{9} \\ &= \frac{55}{72} \times \frac{8}{15} \div \frac{3}{4} + \frac{4}{9} - \frac{5}{9} \\ &= \frac{11}{27} \div \frac{3}{4} + \frac{4}{9} - \frac{5}{9} \\ &= \frac{44}{81} + \frac{4}{9} - \frac{5}{9} \\ &= \frac{80}{81} - \frac{5}{9} \\ &= \frac{35}{81} \end{aligned}$$

$$\begin{aligned} & \left(\frac{5}{6} \times \frac{3}{5} \right) \div \left(\left(\frac{2}{3} - \frac{1}{4} + \frac{5}{9} + \frac{1}{3} \right) \times \frac{1}{2} \right) \\ &= \frac{1}{2} \div \left(\left(\frac{2}{3} - \frac{1}{4} + \frac{5}{9} + \frac{1}{3} \right) \times \frac{1}{2} \right) \\ &= \frac{1}{2} \div \left(\left(\frac{5}{12} + \frac{5}{9} + \frac{1}{3} \right) \times \frac{1}{2} \right) \\ &= \frac{1}{2} \div \left(\left(\frac{35}{36} + \frac{1}{3} \right) \times \frac{1}{2} \right) \\ &= \frac{1}{2} \div \left(\frac{47}{36} \times \frac{1}{2} \right) \\ &= \frac{1}{2} \div \frac{47}{72} \\ &= \frac{36}{47} \end{aligned}$$

Order of Operations with Fractions (J)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

$$\frac{1}{6} \times \left(\frac{7}{8} + \frac{3}{8} - \frac{1}{8} \right) \div \left(\frac{4}{5} \times \left(\frac{5}{9} \div \frac{2}{9} \right) \right)$$

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

$$\frac{7}{8} - \frac{2}{3} + \frac{1}{8} \div \left(\frac{5}{8} \times \left(\frac{4}{9} \times \left(\frac{3}{4} \div \frac{3}{8} \right) \right) \right)$$

$$\frac{3}{8} + \frac{5}{8} - \frac{7}{8} \times \left(\frac{2}{5} \div \left(\left(\frac{4}{5} \div \frac{1}{4} \right) \times \frac{3}{4} \right) \right)$$

Order of Operations with Fractions (J)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

$$\begin{aligned}
 & \frac{1}{6} \times \left(\frac{7}{8} + \frac{3}{8} - \frac{1}{8} \right) \div \left(\frac{4}{5} \times \left(\frac{5}{9} \div \frac{2}{9} \right) \right) \\
 &= \frac{1}{6} \times \left(\frac{5}{4} - \frac{1}{8} \right) \div \left(\frac{4}{5} \times \left(\frac{5}{9} \div \frac{2}{9} \right) \right) \\
 &= \frac{1}{6} \times \frac{9}{8} \div \left(\frac{4}{5} \times \left(\frac{5}{9} \div \frac{2}{9} \right) \right) \\
 &= \frac{1}{6} \times \frac{9}{8} \div \left(\frac{4}{5} \times \frac{5}{2} \right) \\
 &= \frac{1}{6} \times \frac{9}{8} \div 2 \\
 &= \frac{3}{16} \div 2 \\
 &= \frac{3}{32}
 \end{aligned}$$

$$\begin{aligned}
 & \left(\left(\frac{3}{4} + \frac{5}{6} \right) \times \frac{3}{8} \right) \div \frac{1}{8} - \frac{5}{8} - \frac{1}{6} \times \frac{1}{2} \\
 &= \left(\frac{19}{12} \times \frac{3}{8} \right) \div \frac{1}{8} - \frac{5}{8} - \frac{1}{6} \times \frac{1}{2} \\
 &= \frac{19}{32} \div \frac{1}{8} - \frac{5}{8} - \frac{1}{6} \times \frac{1}{2} \\
 &= \frac{19}{4} - \frac{5}{8} - \frac{1}{6} \times \frac{1}{2} \\
 &= \frac{19}{4} - \frac{5}{8} - \frac{1}{12} \\
 &= \frac{33}{8} - \frac{1}{12} \\
 &= \frac{97}{24} \\
 &= 4\frac{1}{24}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{7}{8} - \frac{2}{3} + \frac{1}{8} \div \left(\frac{5}{8} \times \left(\frac{4}{9} \times \left(\frac{3}{4} \div \frac{3}{8} \right) \right) \right) \\
 &= \frac{7}{8} - \frac{2}{3} + \frac{1}{8} \div \left(\frac{5}{8} \times \left(\frac{4}{9} \times 2 \right) \right) \\
 &= \frac{7}{8} - \frac{2}{3} + \frac{1}{8} \div \left(\frac{5}{8} \times \frac{8}{9} \right) \\
 &= \frac{7}{8} - \frac{2}{3} + \frac{1}{8} \div \frac{5}{9} \\
 &= \frac{7}{8} - \frac{2}{3} + \frac{9}{40} \\
 &= \frac{5}{24} + \frac{9}{40} \\
 &= \frac{13}{30}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{3}{8} + \frac{5}{8} - \frac{7}{8} \times \left(\frac{2}{5} \div \left(\left(\frac{4}{5} \div \frac{1}{4} \right) \times \frac{3}{4} \right) \right) \\
 &= \frac{3}{8} + \frac{5}{8} - \frac{7}{8} \times \left(\frac{2}{5} \div \left(\frac{16}{5} \times \frac{3}{4} \right) \right) \\
 &= \frac{3}{8} + \frac{5}{8} - \frac{7}{8} \times \left(\frac{2}{5} \div \frac{12}{5} \right) \\
 &= \frac{3}{8} + \frac{5}{8} - \frac{7}{8} \times \frac{1}{6} \\
 &= \frac{3}{8} + \frac{5}{8} - \frac{7}{48} \\
 &= 1 - \frac{7}{48} \\
 &= \frac{41}{48}
 \end{aligned}$$