# Order of Operations with Fractions (J)

Name: _____ Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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

$= \left(\frac{5}{9}\right)^2 \div \left(\left(\frac{5}{18} + \frac{1}{6}\right) \times \frac{1}{3}\right)$

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

$= \left(\frac{5}{9}\right)^2 \div \frac{4}{27}$

$= \frac{25}{81} \div \frac{4}{27}$

$= \frac{25}{12}$

$= 2\frac{1}{12}$

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

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

$= 0 \times \left(\frac{4}{9} \div \frac{5}{8} + \frac{2}{5}\right)$

$= 0 \times \left(\frac{32}{45} + \frac{2}{5}\right)$

$= 0 \times \frac{10}{9}$

$= 0$

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

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

$= \frac{1}{5} \times \left(0 + \frac{1}{6}\right) \div \frac{1}{4}$

$= \frac{1}{5} \times \frac{1}{6} \div \frac{1}{4}$

$= \frac{1}{30} \div \frac{1}{4}$

$= \frac{2}{15}$

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

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

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

$= \frac{2}{9} \div \left(\frac{11}{9} - \frac{1}{3}\right)$

$= \frac{2}{9} \div \frac{8}{9}$

$= \frac{1}{4}$