Order of Operations with Fractions (J)

Name: _____ Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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Simplify each expression using the correct order of operations.

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

$= \left(\frac{1}{2}\right)^2 \div \left(\frac{2}{15} + \frac{1}{4}\right)$

$= \left(\frac{1}{2}\right)^2 \div \frac{23}{60}$

$= \frac{1}{4} \div \frac{23}{60}$

$= \frac{15}{23}$

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

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

$= \frac{1}{4} \times \left(\frac{56}{45} - \frac{4}{9}\right)$

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

$= \frac{1}{5}$

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

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

$= \frac{3}{5} + \frac{4}{5} \times \frac{9}{5}$

$= \frac{3}{5} + \frac{36}{25}$

$= \frac{51}{25}$

$= 2\frac{1}{25}$

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

$= \left(\frac{49}{81} \div \frac{7}{8} - \frac{2}{9}\right) \times \frac{1}{2}$

$= \left(\frac{56}{81} - \frac{2}{9}\right) \times \frac{1}{2}$

$= \frac{38}{81} \times \frac{1}{2}$

$= \frac{19}{81}$