Order of Operations with Fractions (F)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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

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

$$= \frac{1}{18} \div \left(\frac{1}{3} - \frac{1}{6} + \frac{3}{5}\right)$$

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

$$= \frac{1}{18} \div \frac{23}{30}$$

$$= \frac{5}{69}$$

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

$$= \left(\frac{5}{9} - \frac{2}{15}\right) \times \left(\frac{3}{8} + \frac{5}{8}\right)^3$$

$$= \frac{19}{45} \times \left(\frac{3}{8} + \frac{5}{8}\right)^3$$

$$= \frac{19}{45} \times 1^3$$

$$= \frac{19}{45} \times 1$$

$$= \frac{19}{45}$$

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

$$= \frac{1}{24} \div \left(\frac{1}{2} + \frac{4}{9} \times \left(\frac{3}{8}\right)^2\right)$$

$$= \frac{1}{24} \div \left(\frac{1}{2} + \frac{4}{9} \times \frac{9}{64}\right)$$

$$= \frac{1}{24} \div \left(\frac{1}{2} + \frac{1}{16}\right)$$

$$= \frac{1}{24} \div \frac{9}{16}$$

$$= \frac{2}{27}$$

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

$$= \left(\frac{23}{18} - \frac{1}{3}\right) \div \frac{2}{9} \times \left(\frac{2}{5}\right)^2$$

$$= \frac{17}{18} \div \frac{2}{9} \times \left(\frac{2}{5}\right)^2$$

$$= \frac{17}{18} \div \frac{2}{9} \times \frac{4}{25}$$

$$= \frac{17}{4} \times \frac{4}{25}$$

$$= \frac{17}{25}$$