

Order of Operations with Fractions (E)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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

$$= \frac{5}{9} \times \frac{2}{5} \div \left(\frac{1}{36} + \frac{7}{8} \right)$$

$$= \frac{5}{9} \times \frac{2}{5} \div \frac{65}{72}$$

$$= \frac{2}{9} \div \frac{65}{72}$$

$$= \frac{16}{65}$$

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

$$= \left(\frac{1}{3} - \frac{4}{81} \right) \times \left(\frac{3}{4} \div \frac{2}{3} \right)$$

$$= \frac{23}{81} \times \left(\frac{3}{4} \div \frac{2}{3} \right)$$

$$= \frac{23}{81} \times \frac{9}{8}$$

$$= \frac{23}{72}$$

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

$$= \frac{2}{3} \div \left(\frac{25}{36} - \frac{1}{6} + \frac{7}{9} \right)$$

$$= \frac{2}{3} \div \left(\frac{19}{36} + \frac{7}{9} \right)$$

$$= \frac{2}{3} \div \frac{47}{36}$$

$$= \frac{24}{47}$$

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

$$= \frac{14}{45} \times \left(\frac{1}{2} \right)^2 \div \frac{2}{3}$$

$$= \frac{14}{45} \times \frac{1}{4} \div \frac{2}{3}$$

$$= \frac{7}{90} \div \frac{2}{3}$$

$$= \frac{7}{60}$$