Order of Operations with Fractions (A)

Name:

Date:

Simplify each expression using the correct order of operations.

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

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

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

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

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Simplify each expression using the correct order of operations.

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

$$= \frac{1}{12} \div \frac{1}{3} + \left(\frac{4}{5}\right)^{2}$$

$$= \frac{1}{12} \div \frac{1}{3} + \frac{16}{25}$$

$$= \frac{1}{4} + \frac{16}{25}$$

$$= \frac{89}{100}$$

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

$$= \left(\frac{2}{3}\right)^2 \div \frac{13}{36} \times \frac{1}{5}$$

$$= \frac{4}{9} \div \frac{13}{36} \times \frac{1}{5}$$

$$= \frac{16}{13} \times \frac{1}{5}$$

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

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

$$= \left(\frac{3}{4}\right)^3 \div \left(\frac{5}{6} \times \frac{3}{8}\right)$$

$$= \left(\frac{3}{4}\right)^3 \div \frac{5}{16}$$

$$= \frac{\frac{27}{64}}{\frac{64}{3}} \div \frac{5}{16}$$

$$= \frac{\frac{27}{20}}{\frac{20}{20}}$$

$$= 1\frac{\frac{7}{20}}{\frac{20}{20}}$$

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

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

$$= \left(\frac{4}{9}\right)^2 \div \frac{1}{18}$$

$$= \frac{16}{81} \div \frac{1}{18}$$

$$= \frac{32}{9}$$

$$= 3\frac{5}{9}$$