

Order of Operations with Fractions (B)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

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

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

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$$\begin{aligned}& \left(\frac{1}{3} - \left(-\frac{1}{6} \right) \right)^2 \div \left(\left(-\frac{2}{3} \right) + \left(-\frac{1}{2} \right) \right) \times \frac{1}{4} \\&= \left(\frac{1}{2} \right)^2 \div \left(\left(-\frac{2}{3} \right) + \left(-\frac{1}{2} \right) \right) \times \frac{1}{4} \\&= \left(\frac{1}{2} \right)^2 \div \left(-\frac{7}{6} \right) \times \frac{1}{4} \\&= \frac{1}{4} \div \left(-\frac{7}{6} \right) \times \frac{1}{4} \\&= \left(-\frac{3}{14} \right) \times \frac{1}{4} \\&= -\frac{3}{56}\end{aligned}$$

$$\begin{aligned}& \left(\left(-\frac{2}{5} \right) - \left(-\frac{1}{5} \right) \right)^2 \times \left(\left(-\frac{3}{4} \right) + \left(-\frac{2}{9} \right) \div \frac{8}{9} \right) \\&= \left(-\frac{1}{5} \right)^2 \times \left(\left(-\frac{3}{4} \right) + \left(-\frac{2}{9} \right) \div \frac{8}{9} \right) \\&= \left(-\frac{1}{5} \right)^2 \times \left(\left(-\frac{3}{4} \right) + \left(-\frac{1}{4} \right) \right) \\&= \left(-\frac{1}{5} \right)^2 \times (-1) \\&= \frac{1}{25} \times (-1) \\&= -\frac{1}{25}\end{aligned}$$