Order of Operations with Fractions (A)

Name: _____ Date: _____

Simplify each expression using the correct order of operations.

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

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

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

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

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$$\left(\left(\frac{3}{4}-\frac{3}{8}\right)\times\frac{7}{9}\right)\div\left(\frac{5}{6}+\frac{1}{3}+\frac{1}{2}\right)$$
$$=\left(\frac{3}{8}\times\frac{7}{9}\right)\div\left(\frac{5}{6}+\frac{1}{3}+\frac{1}{2}\right)$$
$$=\frac{7}{24}\div\left(\frac{5}{6}+\frac{1}{3}+\frac{1}{2}\right)$$
$$=\frac{7}{24}\div\left(\frac{7}{6}+\frac{1}{2}\right)$$
$$=\frac{7}{24}\div\frac{5}{3}$$
$$=\frac{7}{40}$$

$$\left(\left(\frac{2}{9}+\frac{4}{9}\right)\div\frac{1}{6}\right)\times\frac{7}{8}-\frac{1}{5}\times\frac{5}{6}$$
$$=\left(\frac{2}{3}\div\frac{1}{6}\right)\times\frac{7}{8}-\frac{1}{5}\times\frac{5}{6}$$
$$=4\times\frac{7}{8}-\frac{1}{5}\times\frac{5}{6}$$
$$=\frac{7}{2}-\frac{1}{5}\times\frac{5}{6}$$
$$=\frac{7}{2}-\frac{1}{6}$$
$$=\frac{10}{3}$$
$$=3\frac{1}{3}$$

$$\left(\frac{5}{9}+\frac{4}{5}-\frac{2}{5}\right)\div\left(\left(\frac{1}{2}\times\frac{4}{9}\right)\div\frac{1}{9}\right)$$
$$=\left(\frac{61}{45}-\frac{2}{5}\right)\div\left(\left(\frac{1}{2}\times\frac{4}{9}\right)\div\frac{1}{9}\right)$$
$$=\frac{43}{45}\div\left(\left(\frac{1}{2}\times\frac{4}{9}\right)\div\frac{1}{9}\right)$$
$$=\frac{43}{45}\div\left(\frac{2}{9}\div\frac{1}{9}\right)$$
$$=\frac{43}{45}\div2$$
$$=\frac{43}{90}$$

$$\left(\frac{2}{3}+\frac{2}{9}\right)\div\frac{5}{8}-\frac{5}{9}\times\left(\frac{5}{6}+\frac{1}{6}\right)$$
$$=\frac{8}{9}\div\frac{5}{8}-\frac{5}{9}\times\left(\frac{5}{6}+\frac{1}{6}\right)$$
$$=\frac{8}{9}\div\frac{5}{8}-\frac{5}{9}\times1$$
$$=\frac{64}{45}-\frac{5}{9}\times1$$
$$=\frac{64}{45}-\frac{5}{9}$$
$$=\frac{13}{15}$$