



## Quick Review

- The order of operations for fractions is the same as for whole numbers.  
 Do the operations in brackets first.  
 Then divide and multiply, in order, from left to right.  
 Then add and subtract, in order, from left to right.

$$\frac{3}{14} \div \left( \frac{5}{8} - \frac{1}{4} \right) + \frac{2}{7} = \frac{3}{14} \div \left( \frac{5}{8} - \frac{2}{8} \right) + \frac{2}{7}$$

Write the fractions in the brackets with common denominators.

$$= \frac{3}{14} \div \frac{3}{8} + \frac{2}{7}$$

Do the operation in the brackets first.

$$= \frac{3}{14} \times \frac{8}{3} + \frac{2}{7}$$

Divide by multiplying by the reciprocal.

$$= \frac{\cancel{3}^1 \times \cancel{8}^4}{14 \times \cancel{3}^1} + \frac{2}{7}$$

$$= \frac{4}{7} + \frac{2}{7}$$

$$= \frac{6}{7}$$

Add.

KEY

## Practice

1. Which operation would you do first?

a)  $\frac{7}{8} \div \left( \frac{3}{4} + \frac{3}{8} \right)$  add in Brackets      b)  $\frac{37}{9} - \frac{5}{9} \times \frac{1}{4}$  multiply

c)  $\left( \frac{9}{16} - \frac{3}{4} \right) \times \frac{5}{8}$  subtract in Brackets

d)  $\frac{3}{4} \times \left( \frac{3}{4} - \frac{1}{4} \div \frac{1}{2} \right)$  divide in Brackets

2. Elise was asked to evaluate  $1\frac{1}{3} \div \frac{3}{4} \times \frac{2}{3}$ . Her work is shown below. Is her answer correct?

Explain.

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

$$= \frac{4}{3} \times \frac{2}{1}$$

$$= \frac{8}{3}$$

$$= 2\frac{2}{3}$$

Her answer is/is not correct.

$$\frac{4}{3} \div \frac{3}{4} \times \frac{2}{3}$$


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$$\frac{4}{3} \times \frac{4}{3} \times \frac{2}{3} = \frac{32}{27} = 1\frac{5}{27}$$

3. Evaluate. Show all steps.

$$\text{a) } \left(\frac{1}{2} + \frac{2}{3}\right) \times \frac{1}{7} = \frac{1}{6}$$

$$\text{b) } \left(1 - \frac{1}{4}\right) \div \left(1 + \frac{3}{4}\right) = \frac{3}{7}$$

$$\text{c) } \frac{1}{3} \div \left(\frac{5}{6} \times \frac{1}{4}\right) = 1\frac{3}{5}$$

$$\text{d) } \frac{4}{7} \times \frac{3}{5} - \frac{1}{5} = \frac{1}{7}$$

4. Evaluate.

$$\text{a) } \frac{7}{9} \times \frac{3}{5} - \frac{1}{6} \div \frac{5}{2} = \frac{2}{5}$$

$$\text{b) } \frac{1}{8} + \frac{3}{4} \div \frac{5}{8} - \frac{4}{5} = \frac{21}{40}$$

$$\text{c) } \frac{6}{7} \div \frac{3}{22} \times \frac{7}{11} \div \frac{8}{9} = 4\frac{1}{2}$$

$$\text{d) } \frac{11}{12} + \frac{5}{6} \times \frac{3}{4} - \frac{5}{6} = \frac{17}{24}$$

5. Evaluate.

$$\text{a) } 3\frac{1}{3} \div 4\frac{1}{6} \times 2\frac{1}{4} = 1\frac{4}{5}$$

$$\text{b) } \frac{4}{5} \times \frac{5}{8} \div \frac{5}{8} \times \frac{3}{4} = \frac{3}{5}$$

$$\text{c) } \frac{5}{12} \div \frac{3}{8} \div \frac{3}{4} \times \frac{9}{10} = 1\frac{1}{3}$$

$$\text{d) } 3\frac{1}{2} \div 5\frac{1}{3} \times 1\frac{1}{3} \div 1\frac{1}{6} = \frac{3}{4}$$

6. Evaluate.

$$\text{a) } \left(\frac{5}{9} + \frac{2}{3}\right) \div \left(\frac{3}{4} + \frac{5}{8}\right) = \frac{8}{9}$$

$$\text{b) } \frac{9}{16} - \left(\frac{3}{4} - \frac{2}{3}\right) \times \frac{3}{4} = \frac{1}{2}$$

$$\text{c) } 1\frac{3}{5} \times \left(\frac{5}{8} + \frac{3}{4} - \frac{5}{6}\right) = \frac{13}{15}$$

$$\text{d) } \left(\frac{9}{16} \div \frac{5}{12}\right) - \left(\frac{2}{5} \times \frac{7}{8}\right) = \frac{1}{6}$$

$$\text{e) } 2\frac{2}{3} \times 1\frac{1}{8} + \left(2\frac{3}{4} + 1\frac{3}{8}\right) = 7\frac{1}{8}$$

$$\text{f) } \left(4\frac{5}{8} - 2\frac{3}{4}\right) \div \left(2\frac{1}{3} + 1\frac{1}{6}\right) = \frac{15}{28}$$

**HINT**

Convert mixed numbers to improper fractions first.

