Applying Order of Operations with Fractions and Mixed Numbers

Applies the order of operations with proper fractions	Applies the order of operations with mixed numbers	Applies the order of operations with fractions and mixed number, including brackets	Solves a problem involving the order of operations with fractions and mixed numbers

$\frac{5}{6} + \frac{2}{3} \times \frac{1}{4}$

I multiplied first.

$\frac{2}{3} \times \frac{1}{4} = \frac{2}{12}$

$= \frac{1}{6}$

Then, added.

$\frac{5}{6} + \frac{1}{6} = \frac{6}{6}$

$= 1$

$2\frac{1}{5} \div \frac{4}{5} - 1\frac{1}{3}$

I divided first.

$2\frac{1}{5} \div \frac{4}{5} = \frac{11}{5} \div \frac{4}{5}$

$= \frac{11}{4}$

Then, I subtracted.

$\frac{11}{4} - 1\frac{1}{3} = \frac{11}{4} - \frac{4}{3}$

$= \frac{33}{12} - \frac{16}{12}$

$= \frac{17}{12}$

$= 1\frac{5}{12}$

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

I did the addition in the brackets first.

$\frac{3}{8} \div 2\frac{3}{4} = \frac{3}{8} + \frac{11}{4}$

$= \frac{3}{8} + \frac{22}{8}$

$= \frac{25}{8}$

Then, I multiplied.

$3\frac{1}{2} \times \frac{11}{8} = \frac{7}{2} \times \frac{25}{8}$

$= \frac{175}{16}$

$= 10\frac{15}{16}$

In one week, a person exercised $1\frac{5}{6}$ h two days, $\frac{11}{12}$ h three days, and $2\frac{3}{4}$ h one day. How many hours did the person exercise that week?

I wrote an expression for this situation.

$2 \times 1\frac{5}{6} + 3 \times \frac{11}{12} + 2\frac{3}{4}$

I did the multiplication first.

$2 \times 1\frac{5}{6} = 2 \times \frac{11}{6} = \frac{11}{3}$

$3 \times \frac{11}{12} = \frac{33}{12}$

Then, added.

$\frac{11}{3} + \frac{33}{12} + 2\frac{3}{4} = 3\frac{2}{3} + 2\frac{3}{4} + 2\frac{3}{4}$

$= 7 + \frac{2}{3} + \frac{6}{4}$

$= 7 + \frac{8}{12} + \frac{8}{12}$

$= 7 + \frac{26}{12}$

$= 7 + 2\frac{2}{12}$

$= 9\frac{1}{6}$

Applying Order of Operations with Fractions and Mixed Numbers (cont'd)			
			So, the result of my expression is: $2 \times 1\frac{5}{6} + 3 \times \frac{11}{12} + 2\frac{3}{4} = 9\frac{1}{6}$ The person exercised for $9\frac{1}{6}$ h that week.
Observations/Documentation			

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