Number

Activity 25 Assessment

Applying the Order of Operations with Fractions and Mixed Numbers

Applying Order of Operations with Fractions and Mixed Numbers

Applies the order of operations with proper fractions

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

I multiplied first.

$\frac{2}{3} \times \frac{1}{4} = \frac{2}{12} = \frac{1}{6}$

Then, added.

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

Applies the order of operations with mixed numbers

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

I divided first.

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

$= \frac{11}{4}$

Then, I subtracted.

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

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

$= \frac{17}{12}$

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

Applies the order of operations with fractions and mixed number, including brackets

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

I did the addition in the brackets first.

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

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

$= \frac{25}{8}$

Then, I multiplied.

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

$= \frac{175}{16}$

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

Solves a problem involving the order of operations with fractions and mixed numbers

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.

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

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

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

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

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

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

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Applying the Order of Operations with Fractions and Mixed Numbers

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			