

Activity 17 Assessment

Adding and Subtracting Fractions and Mixed Numbers

Adding and Subtracting Fractions

Estimates the sum or difference of fractions or mixed numbers

$$2\frac{7}{10} + 3\frac{1}{5}$$

“Because $\frac{1}{5}$ is a small fraction, I can think of the second number as 3. To compensate and because

$\frac{7}{10}$ is a bigger fraction, I’ll think of the

first number as 3. My estimate for the sum is $3 + 3 = 6$.”

Adds or subtracts fractions or mixed numbers

“To add $2\frac{7}{10} + 3\frac{1}{5}$, I’m going to think of the whole numbers and fractions separately.

$$(2 + 3) + \left(\frac{7}{10} + \frac{1}{5}\right)$$

$$= 5 + \left(\frac{7}{10} + \frac{1}{5}\right)$$

I need to express both fractions with the same denominator.

$$= 5 + \left(\frac{7}{10} + \frac{1}{5} \times \frac{2}{2}\right)$$

$$= 5 + \left(\frac{7}{10} + \frac{2}{10}\right)$$

$$= 5\frac{9}{10}$$

Completes calculations involving both adding and subtracting fractions or mixed numbers

$$1\frac{3}{4} - \frac{5}{8} + \frac{1}{2}$$

I’m going to write equivalent fractions with denominators of 8.

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

$$= 1\frac{6}{8} - \frac{5}{8} + \frac{4}{8}$$

$$= 1\frac{1}{8} + \frac{4}{8}$$

$$= 1\frac{5}{8}$$

Solves problems that involve the addition and/or subtraction of fractions

“Samar is cutting pieces from a 4 ft long wooden board. How much is left after they cut a piece $1\frac{2}{3}$ ft long and another piece $\frac{3}{4}$ ft long?

I can represent this with the expression $4 - 1\frac{2}{3} - \frac{3}{4}$.

First, I’ll subtract the whole numbers.

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

Next, I’ll write each number as a fraction with a denominator of 12.

$$= \frac{36}{12} - \frac{8}{12} - \frac{9}{12}$$

$$= \frac{19}{12}, \text{ or } 1\frac{7}{12}$$

There are $1\frac{7}{12}$ ft left.”

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Observations/Documentation

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