

Addition and Subtraction of Fractions, Whole Numbers, and Mixed Numbers

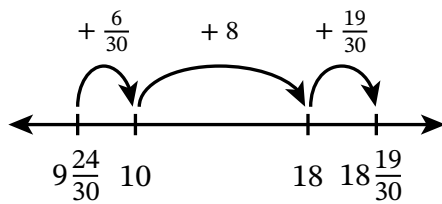
Dear Family,

Recently, your student learned to add and subtract with fractions that are less than 1. Now, your student is learning to add and subtract with fractions, whole numbers, and mixed numbers. They use multiple methods that may include number lines, number bonds, or the arrow way. Your student is encouraged to use a method that makes sense based on the numbers in the problem. They begin to notice that some methods are more efficient than other methods. Your student is also encouraged to use estimation to determine whether the answer makes sense.

Key Terms

minuend

subtrahend



$$4 - \frac{2}{7} = 3 + \frac{5}{7} = 3\frac{5}{7}$$

A number bond diagram showing 4 split into 3 and $\frac{7}{7}$, with $\frac{2}{7}$ subtracted from $\frac{7}{7}$ to leave $\frac{5}{7}$.

$$6\frac{3}{8} \xrightarrow{+\frac{5}{8}} 7 \xrightarrow{+3} 10 \xrightarrow{+5} 15$$

$$6\frac{3}{8} + 8\frac{5}{8} = 15$$

Students are familiar with number lines, number bonds, and the arrow way from whole-number addition and subtraction.

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

Minuend Subtrahend

In a subtraction problem, the minuend is the total, and the subtrahend is the number being subtracted from the total.

$$5\frac{7}{9} + 3\frac{2}{4} = 5\frac{7 \times 4}{9 \times 4} + 3\frac{2 \times 9}{4 \times 9}$$

$$= 5\frac{28}{36} + 3\frac{18}{36}$$

A number bond diagram showing $3\frac{18}{36}$ split into $\frac{8}{36}$ and $3\frac{10}{36}$.

$$5\frac{28}{36} \xrightarrow{+\frac{8}{36}} 6 \xrightarrow{+3} 9 \xrightarrow{+\frac{10}{36}} 9\frac{10}{36}$$

$$5\frac{7}{9} + 3\frac{2}{4} = 9\frac{10}{36}$$

Students can estimate a sum or difference to see whether their answer is reasonable. In this case, they think of the original problem as being close to $6 + 3$ and reason that the answer is between 9 and 10.

At-Home Activity

Cooking with Fractions

Look for recipes with fractional amounts, such as $1\frac{1}{2}$ cups or $\frac{3}{4}$ tablespoons. Ask your student addition and subtraction questions by using the fractional measurements in the recipe.

- “How many total cups of flour and sugar are used in this recipe?”
- “How many more teaspoons of baking powder are used than teaspoons of vanilla?”
- “How many cups of water would we need for 2 batches of this recipe?”