

Fraction Moves

Use equal parts to add, subtract, and solve fraction problems.

GRADE 5 • 5.NR.3

5.NR.3 "Describe fractions and perform operations with fractions to solve relevant, mathematical problems using part-whole strategies and visual models."

NAME _____

DATE _____

MATCH THE PARTS

To add or subtract fractions, first rename them with the same denominator so the parts are the same size. Then add or subtract the numerators and simplify the result when possible. A visual model can help you see equal-size parts of one whole.

WORKED EXAMPLE

Find $\frac{2}{3} + \frac{1}{4}$.

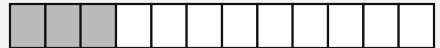
1. Use 12 as a common denominator.
2. Rename $\frac{2}{3}$ as $\frac{8}{12}$ and $\frac{1}{4}$ as $\frac{3}{12}$.
3. Add: $\frac{8}{12} + \frac{3}{12} = \frac{11}{12}$.

Answer: $\frac{11}{12}$

$$\frac{2}{3} = \frac{8}{12}$$

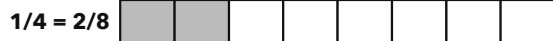
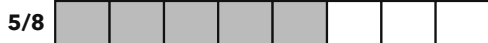


$$\frac{1}{4} = \frac{3}{12}$$



PRACTICE 6 problems

1 Use the model. Find $\frac{5}{8} + \frac{1}{4}$.



ANSWER _____

2 Find $\frac{3}{5} + \frac{1}{10}$. Simplify if needed.

ANSWER _____

3 Find $\frac{7}{9} - \frac{1}{3}$. Simplify if needed.

ANSWER _____

4 Find $\frac{5}{6} - \frac{1}{4}$. Simplify if needed.

ANSWER _____

5 Find $\frac{2}{7} + \frac{3}{14}$. Simplify if needed.

ANSWER _____

6 Find $\frac{11}{12} - \frac{2}{9}$. Simplify if needed.

ANSWER _____

APPLY IT Show your work

- 1** Maya practiced a dance routine for $\frac{3}{4}$ hour on Monday and $\frac{2}{3}$ hour on Tuesday. How many hours did she practice altogether? Write your answer as a mixed number.

WORK SPACE

ANSWER _____

- 2** Jalen read $\frac{5}{8}$ of a graphic novel on Saturday and $\frac{1}{6}$ of the novel on Sunday. What fraction of the graphic novel does he still need to read?

WORK SPACE

ANSWER _____

CHALLENGE One step up

The bar represents one whole community garden in 15 equal parts. Shaded parts are flowers, which use $\frac{2}{3}$ of the garden. Of the remaining space, $\frac{3}{5}$ is planted with vegetables. What fraction of the whole garden is vegetables? What fraction is empty? Explain which whole the fraction $\frac{3}{5}$ describes.

Whole garden 

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Use the model. Find $5/8 + 1/4$.	7/8
2	Find $3/5 + 1/10$. Simplify if needed.	7/10
3	Find $7/9 - 1/3$. Simplify if needed.	4/9
4	Find $5/6 - 1/4$. Simplify if needed.	7/12
5	Find $2/7 + 3/14$. Simplify if needed.	1/2
6	Find $11/12 - 2/9$. Simplify if needed.	25/36

PART 2 • APPLY IT

- 1 5/12 hours** Rename the fractions in twelfths: $3/4 = 9/12$ and $2/3 = 8/12$. Add to get $17/12$, which is $1\ 5/12$.
- 5/24** The amount read is $5/8 + 1/6 = 15/24 + 4/24 = 19/24$. Subtract from one whole: $24/24 - 19/24 = 5/24$.

CHALLENGE

Vegetables: 1/5 of the whole garden. Empty: 2/15 of the whole garden. Five of the 15 parts remain after flowers. Vegetables use 3 of those 5 parts, so $3/15 = 1/5$ of the whole garden; the other 2 parts are empty. The fraction $3/5$ refers to the remaining non-flower space.

Accept equivalent fractions unless a specific form is requested. For the first word problem, $17/12$ hours is equivalent, but the requested final mixed-number answer is $1\ 5/12$ hours. Check that students distinguish the whole garden from the remaining space in the challenge.