

Grade 4 · Adding and Subtracting Fractions and Mixed Numbers · Worksheet

Common Core 4.NF.B.3 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

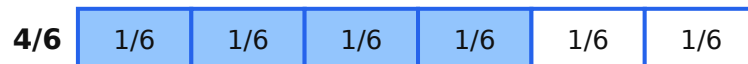
These 25 problems practice decomposing fractions into unit fractions and other sums, and adding and subtracting fractions with like denominators (4.NF.B.3). Bar models and number lines help picture each step.

Later problems use mixed numbers: renaming them as fractions, adding and subtracting them, and renaming when the fractions pass one whole. The last six are word problems.

Grade 4 Common Core: 4.NF.B.3

Problem 1: Unit fractions in a bar

The bar shows $\frac{4}{6}$ shaded. Write $\frac{4}{6}$ as a sum of unit fractions.



Four of six parts are shaded.

Problem 2: Three ways to split seven eighths

Write $\frac{7}{8}$ as the sum of two fractions with denominator 8 in three different ways.

Problem 3: Missing part

Find the missing fraction.

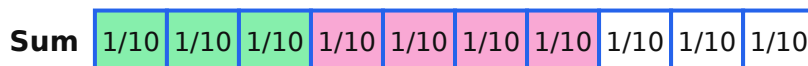
- a. $\frac{5}{10} = \frac{2}{10} + ?$
b. $\frac{9}{12} = ? + \frac{4}{12}$

Problem 4: Add like fractions

- a. Add: $\frac{1}{5} + \frac{2}{5}$
b. Add: $\frac{3}{8} + \frac{4}{8}$
c. Add: $\frac{1}{12} + \frac{4}{12}$
d. Add: $\frac{20}{100} + \frac{35}{100}$

Problem 5: Add with a model

Use the bar to add $\frac{3}{10}$ and $\frac{4}{10}$.



3 tenths (green) and 4 tenths (pink).

Problem 6: Subtract like fractions

- a. Subtract: $\frac{5}{10} - \frac{2}{10}$
- b. Subtract: $\frac{9}{10} - \frac{4}{10}$
- c. Subtract: $\frac{11}{12} - \frac{5}{12}$
- d. Subtract: $\frac{8}{8} - \frac{3}{8}$

Problem 7: Subtract with a model

The bar shows $\frac{5}{8}$ with 2 parts crossed out. Find $\frac{5}{8} - \frac{2}{8}$.



Two of the five shaded parts are crossed out.

Problem 8: Find the unknown

- a. $? + \frac{2}{7} = \frac{6}{7}$
- b. $\frac{3}{10} + ? = \frac{8}{10}$
- c. $\frac{9}{12} - ? = \frac{4}{12}$
- d. $? - \frac{3}{8} = \frac{2}{8}$

Problem 9: Make one whole

Write a fraction for the missing part so that the sum is 1.

- a. $\frac{3}{5} + ? = 1$
- b. $1 - \frac{3}{8} = ?$
- c. $1 - \frac{7}{12} = ?$

Problem 10: Whole numbers as fractions

Write each whole number as a fraction with the given denominator.

- a. $1 = \frac{?}{6}$

- b. $2 = \frac{?}{3}$
 c. $3 = \frac{?}{4}$

Problem 11: Mixed number as a fraction

The model shows $2\frac{1}{4}$. Write it as a fraction greater than 1.



Two wholes and one fourth.

Problem 12: Rename mixed numbers

- Rename $3\frac{3}{10}$ as a fraction.
- Rename $2\frac{5}{10}$ as a fraction.
- Rename $4\frac{7}{8}$ as a fraction.
- Rename $1\frac{9}{12}$ as a fraction.

Problem 13: Rename fractions as mixed numbers

- Rename $\frac{7}{4}$ as a mixed number.
- Rename $\frac{11}{5}$ as a mixed number.
- Rename $\frac{17}{6}$ as a mixed number.
- Rename $\frac{25}{8}$ as a mixed number.

Problem 14: Add mixed numbers

- Add: $1\frac{2}{5} + 2\frac{1}{5}$
- Add: $3\frac{1}{8} + 2\frac{4}{8}$
- Add: $4\frac{3}{10} + 1\frac{5}{10}$

Problem 15: Add mixed numbers and rename

- Add: $2\frac{3}{4} + 1\frac{3}{4}$
- Add: $1\frac{5}{6} + 2\frac{4}{6}$
- Add: $3\frac{7}{8} + 2\frac{5}{8}$

Problem 16: Subtract mixed numbers

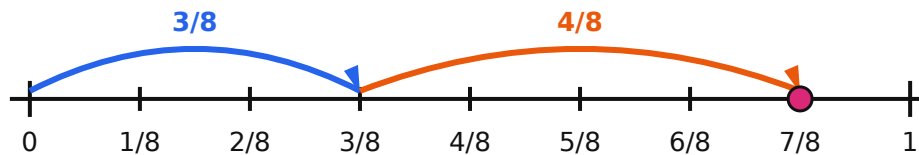
- Subtract: $4\frac{5}{6} - 1\frac{2}{6}$
- Subtract: $6\frac{7}{8} - 2\frac{1}{8}$
- Subtract: $5\frac{9}{10} - 3\frac{4}{10}$

Problem 17: Subtract with renaming

- a. Subtract: $3\frac{1}{4} - 1\frac{3}{4}$
- b. Subtract: $5\frac{3}{6} - 2\frac{5}{6}$
- c. Subtract: $4\frac{1}{5} - 1\frac{4}{5}$
- d. Subtract: $6 - 2\frac{3}{8}$

Problem 18: Jumps on a number line

A number line shows a jump of $\frac{3}{8}$ followed by a jump of $\frac{4}{8}$, starting at 0. Write an equation and tell where the jumps end.



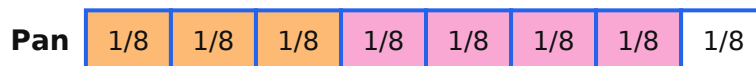
Two jumps along the number line.

Problem 19: Find the mistake

Ethan wrote $\frac{2}{5} + \frac{1}{5} = \frac{3}{10}$. Explain his mistake and give the correct sum.

Problem 20: Bake sale brownies

At the school bake sale, Maya sold $\frac{3}{8}$ of a pan of brownies in the morning and $\frac{4}{8}$ of the pan in the afternoon. What fraction of the pan did she sell? What fraction is left?



Morning (orange), afternoon (pink), left (white).

Problem 21: Hiking trail

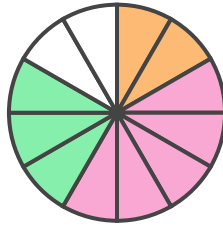
On a road trip, Jamal hiked $2\frac{5}{6}$ miles on Saturday and $1\frac{4}{6}$ miles on Sunday. How many miles did he hike in all?

Problem 22: Ribbon left over

Sofia has $5\frac{1}{8}$ yards of ribbon. She cuts off $2\frac{6}{8}$ yards for a gift. How much ribbon is left?

Problem 23: Pizza party

A pizza is cut into 12 equal slices. Diego ate $\frac{2}{12}$ of the pizza, Aisha ate $\frac{5}{12}$, and Noah ate $\frac{3}{12}$. How much of the pizza did they eat altogether? How much is left?



Diego $\frac{2}{12}$ Aisha $\frac{5}{12}$ Noah $\frac{3}{12}$
Slices eaten by each person.

Problem 24: Farmers market fruit

At the farmers market, Priya bought $3\frac{3}{5}$ pounds of apples and $2\frac{4}{5}$ pounds of pears. She used $1\frac{1}{5}$ pounds of the fruit in a pie. How many pounds of fruit does she have left?

Problem 25: Filling the water jug

Liam pours $3\frac{1}{4}$ cups of water into a jug, then adds $2\frac{3}{4}$ more cups. Later he pours out $4\frac{2}{4}$ cups. How much water is in the jug now?