

Grade 5 · Adding and Subtracting Fractions with Unlike Denominators · Worksheet

Common Core 5.NF.A.1, 5.NF.A.2 · mathovore.fr

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

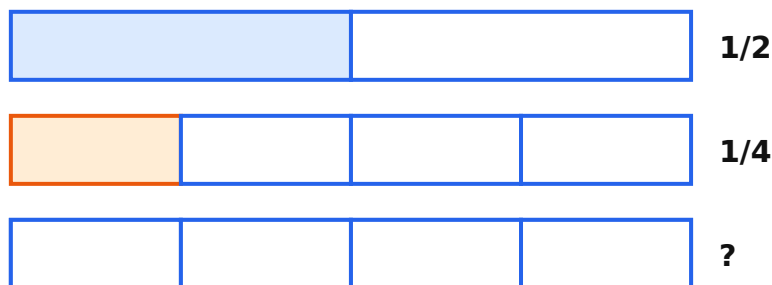
These 23 problems practice adding and subtracting fractions and mixed numbers with unlike denominators, standards 5.NF.A.1 and 5.NF.A.2. Early problems use bars and number lines to show why a common denominator is needed.

Later problems include benchmark estimation and word problems about recipes, distances and time. Show each step, simplify every answer, and check each result with an estimate before moving on.

Grade 5 Common Core: 5.NF.A.1 · 5.NF.A.2

Problem 1: Add with fraction bars

The bars show one half and one fourth. Find the sum.



Rename both bars with the same size pieces.

Problem 2: Rename fractions

Find the missing numerator n.

- a. $\frac{1}{12} = \frac{n}{12}$
- b. $\frac{1}{4} = \frac{n}{12}$
- c. $\frac{1}{5} = \frac{n}{12}$
- d. $\frac{1}{5} = \frac{n}{20}$

Problem 3: Find the least common denominator

Find the least common denominator of each pair of fractions.

- a. $\frac{1}{6}$ and $\frac{3}{4}$
- b. $\frac{1}{2}$ and $\frac{3}{10}$
- c. $\frac{4}{8}$ and $\frac{1}{12}$
- d. $\frac{1}{9}$ and $\frac{5}{6}$

Problem 4: Add fractions with sums less than 1

Find each sum.

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

Problem 5: Add fractions with sums greater than 1

Find each sum. Write each answer as a mixed number.

- a. $2\frac{1}{3} + 2\frac{1}{4}$
- b. $3\frac{1}{5} + 3\frac{1}{10}$
- c. $5\frac{1}{7} + 1\frac{1}{10}$
- d. $1\frac{7}{12} + 3\frac{1}{8}$

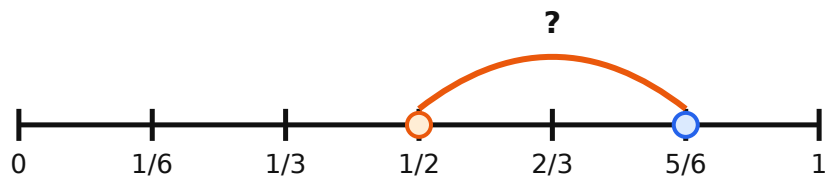
Problem 6: Subtract fractions with unlike denominators

Find each difference. Simplify each answer.

- a. $3\frac{3}{4} - 1\frac{1}{3}$
- b. $5\frac{1}{5} - 1\frac{1}{4}$
- c. $7\frac{1}{8} - 2\frac{3}{4}$
- d. $4\frac{1}{5} - 1\frac{3}{10}$

Problem 7: Subtract on a number line

The number line shows a jump back from five sixths to one half. Find $\frac{5}{6} - \frac{1}{2}$.



A jump back from $\frac{5}{6}$ to $\frac{1}{2}$.

Problem 8: Find the missing fraction

Find the fraction that makes each equation true.

- a. $? + \frac{1}{4} = \frac{7}{12}$
- b. $\frac{5}{6} - ? = \frac{1}{3}$
- c. $\frac{3}{4} - ? = \frac{8}{10}$
- d. $? + \frac{2}{5} = \frac{9}{10}$

Problem 9: Add mixed numbers

Find each sum. Write each answer as a mixed number.

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

Problem 10: Subtract mixed numbers

Find each difference.

- a. $5\frac{3}{4} - 2\frac{1}{3}$
- b. $6\frac{1}{2} - 2\frac{3}{4}$
- c. $4\frac{1}{6} - 1\frac{1}{8}$
- d. $7 - 3\frac{2}{5}$

Problem 11: Estimate with benchmarks

Estimate each answer by rounding each fraction to 0, $\frac{1}{2}$, or 1. Do not find the exact value.

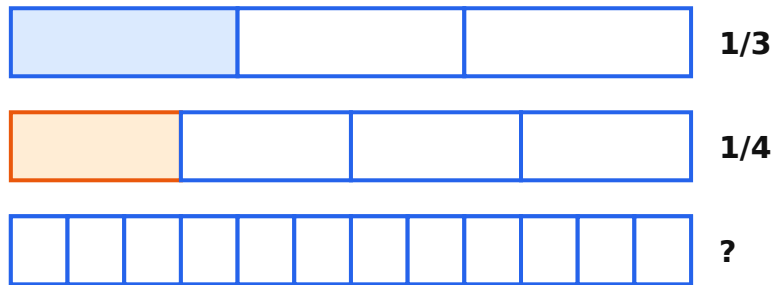
- a. $\frac{7}{8} + \frac{1}{10}$
- b. $\frac{5}{12} + \frac{6}{11}$
- c. $\frac{3}{7} + \frac{1}{8}$
- d. $\frac{11}{12} - \frac{4}{9}$

Problem 12: Is the answer reasonable?

Liam says that $\frac{2}{3} + \frac{1}{2} = \frac{3}{5}$. Explain why his answer cannot be correct, then find the correct sum.

Problem 13: Add with twelfths bars

Use the bars to find $\frac{1}{3} + \frac{1}{4}$.



A third and a fourth to be renamed in twelfths.

Problem 14: Compare sums and differences

Compare each pair using $<$, $>$, or $=$.

- a. $\frac{1}{2} + \frac{1}{3}$ and $\frac{4}{6}$
- b. $\frac{1}{4} - \frac{1}{6}$ and $\frac{1}{12}$
- c. $\frac{1}{4} + \frac{1}{4}$ and $\frac{1}{2}$
- d. $\frac{1}{3} - \frac{1}{3}$ and $\frac{1}{3}$

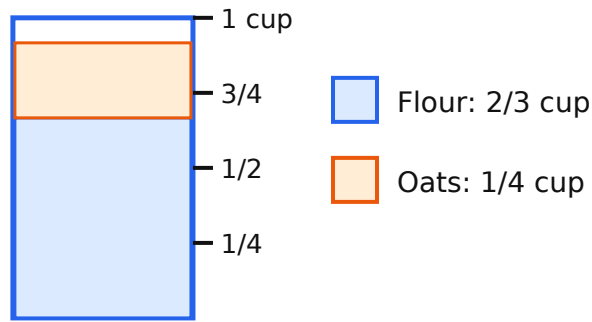
Problem 15: Add three fractions

Find each sum.

- a. $\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$
- b. $\frac{1}{4} + \frac{1}{6} + \frac{1}{3}$
- c. $\frac{2}{5} + \frac{1}{2} + \frac{1}{10}$

Problem 16: Flour and oats

Maya pours $\frac{2}{3}$ cup of flour and $\frac{1}{4}$ cup of oats into a measuring cup. How much do the dry ingredients fill?



A measuring cup with flour and oats.

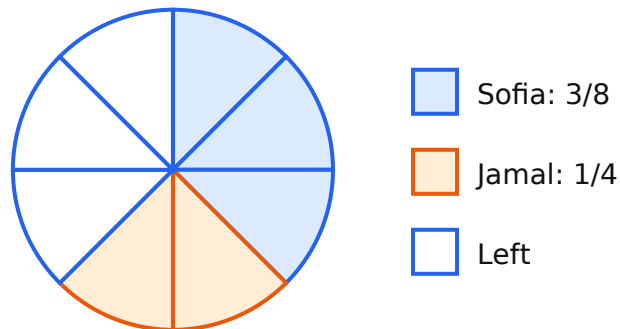
Problem 17: Running miles

Noah runs $\frac{3}{4}$ mile on Monday and $\frac{5}{6}$ mile on Tuesday. How far does he run in all?

Problem 18: Pizza night

A pizza is cut into 8 equal slices. Sofia eats $\frac{3}{8}$ of the pizza and Jamal eats $\frac{1}{4}$ of it.

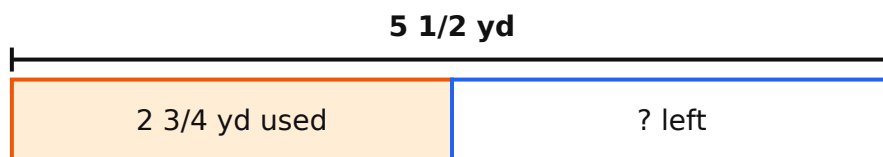
- What fraction of the pizza do they eat together?
- What fraction is left?



A pizza with 8 slices.

Problem 19: Ribbon for a gift

A roll has $5 \frac{1}{2}$ yards of ribbon. Ava uses $2 \frac{3}{4}$ yards for a gift box. How much ribbon is left?



The whole roll is $5 \frac{1}{2}$ yards.

Problem 20: Walk to the park

Mei walks $2\frac{1}{3}$ miles to the library and then $1\frac{7}{8}$ miles to the park.

- Estimate the total distance by rounding each distance to the nearest half mile.
- Find the exact distance.

Problem 21: Flour and sugar

Diego uses $4\frac{1}{4}$ cups of flour and $2\frac{2}{3}$ cups of sugar in a recipe. How many more cups of flour than sugar does he use?

Problem 22: Trail mix

Aisha makes 10 pounds of trail mix. She uses $3\frac{1}{2}$ pounds of nuts and $2\frac{3}{4}$ pounds of raisins. The rest is chocolate chips. How many pounds of chocolate chips does she use?

Problem 23: Homework time

Priya studies $1\frac{1}{4}$ hours on Monday, $\frac{3}{4}$ hour on Tuesday, and $1\frac{1}{2}$ hours on Wednesday. Her goal is 4 hours for the three days.

- How many hours does she study in all?
- By how many hours does she miss her goal?