

Grade 5 - Adding and Subtracting Fractions with Unlike Denominators - Quiz

Common Core 5.NF.A.1, 5.NF.A.2 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

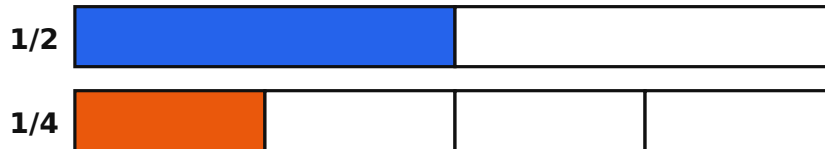
Answer these 10 multiple-choice questions on adding and subtracting fractions with unlike denominators. Each question has one correct answer. Find a common denominator first, then read the explanation to learn from any mistake.

Grade 5 · Common Core State Standards: **5.NF.A.1, 5.NF.A.2**

Questions

Question 1

The bars show two fractions. What is their sum?



The bars show one half and one fourth.

- A. $\frac{3}{4}$
- B. $\frac{1}{2}$
- C. $\frac{3}{8}$
- D. $\frac{1}{8}$

Question 2

Find $\frac{2}{3} + \frac{1}{6}$.

- A. $\frac{1}{2}$
- B. $\frac{1}{3}$
- C. $\frac{2}{3}$
- D. $\frac{2}{18}$

Question 3

Find $\frac{3}{4} - \frac{1}{6}$.

- A. $\frac{5}{12}$
- B. $\frac{11}{12}$
- C. $\frac{2}{12}$
- D. $\frac{7}{12}$

Question 4

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

- A. $3\frac{3}{4}$
- B. $3\frac{5}{6}$
- C. $3\frac{1}{4}$
- D. $4\frac{1}{4}$

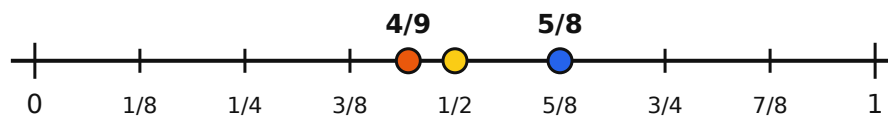
Question 5

Find $7\frac{1}{5} - 3\frac{1}{2}$.

- A. $3\frac{7}{10}$
- B. $4\frac{3}{10}$
- C. $3\frac{3}{10}$
- D. $4\frac{7}{10}$

Question 6

Use the number line to choose the best estimate of $\frac{5}{8} + \frac{4}{9}$.



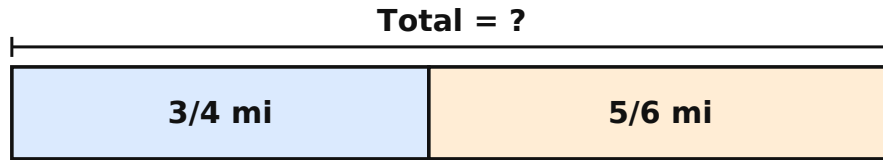
Where do the fractions sit?

- A. About 1/2
- B. About 1
- C. About 2

D. About $1\frac{1}{2}$

Question 7

Sofia ran $\frac{3}{4}$ mile and then $\frac{5}{6}$ mile. How far did she run in all?



Sofia's run.

- A. $\frac{8}{10}$ mile
- B. $1\frac{1}{12}$ miles
- C. $\frac{19}{24}$ mile
- D. $1\frac{7}{12}$ miles

Question 8

Liam has $4\frac{1}{2}$ cups of flour and uses $1\frac{2}{3}$ cups. How much flour is left?

- A. $3\frac{1}{6}$ cups
- B. $2\frac{1}{6}$ cups
- C. $2\frac{5}{6}$ cups
- D. $3\frac{5}{6}$ cups

Question 9

Which number makes this true? $\frac{2}{3} + ? = 1\frac{1}{4}$

- A. $\frac{5}{12}$
- B. $\frac{7}{12}$
- C. $\frac{11}{12}$
- D. $\frac{1}{12}$

Question 10

Ethan walks $\frac{1}{2}$ mile to school and $\frac{3}{10}$ mile to the park. How much farther is the school?

- A. $\frac{1}{10}$ mile
- B. $\frac{1}{5}$ mile

- C. $\frac{4}{5}$ mile
D. $\frac{3}{10}$ mile

Answers

1. **C** - One half is $\frac{2}{4}$, and $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$. Adding numerators and denominators gives $\frac{2}{6}$, which is a common mistake.
2. **A** - Rename $\frac{2}{3}$ as $\frac{4}{6}$, then $\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$. Adding $2 + 1$ over $3 + 6$ is wrong.
3. **D** - The LCD is 12: $\frac{9}{12} - \frac{2}{12} = \frac{7}{12}$. A typical mistake is renaming $\frac{1}{6}$ as $\frac{4}{12}$ instead of $\frac{2}{12}$.
4. **A** - Rename $\frac{1}{2}$ as $\frac{2}{4}$. Then $1 + 2 = 3$ and $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$.
5. **A** - Rename with tenths: $7\frac{2}{10} - 3\frac{5}{10}$. Regroup: $6\frac{12}{10} - 3\frac{5}{10} = 3\frac{7}{10}$. Subtracting the smaller fraction from the larger gives $4\frac{3}{10}$, which is wrong.
6. **B** - $\frac{5}{8}$ is a little more than $\frac{1}{2}$ and $\frac{4}{9}$ is a little less than $\frac{1}{2}$. Two halves make about 1.
7. **D** - $\frac{9}{12} + \frac{10}{12} = \frac{19}{12} = 1\frac{7}{12}$. Adding the numerators and denominators gives $\frac{8}{10}$, which is too small.
8. **C** - $4\frac{3}{6} - 1\frac{4}{6}$: regroup to $3\frac{9}{6} - 1\frac{4}{6} = 2\frac{5}{6}$.
9. **B** - $1\frac{1}{4}$ is $\frac{15}{12}$ and $\frac{2}{3}$ is $\frac{8}{12}$. Then $\frac{15}{12} - \frac{8}{12} = \frac{7}{12}$.
10. **B** - $\frac{5}{10} - \frac{3}{10} = \frac{2}{10}$, which simplifies to $\frac{1}{5}$. Adding gives $\frac{4}{5}$, which is the wrong operation.

Remember

- Fractions must have the same denominator before they can be added or subtracted.
- The least common denominator is the smallest number both denominators divide into.
- Only the numerators are added or subtracted. The denominator stays the same.
- To subtract mixed numbers, regroup one whole as a fraction when needed.
- Benchmarks 0, $\frac{1}{2}$, and 1 help check that an answer makes sense.