

Fraction Fix-It

Estimate, solve, and simplify like-denominator fractions.

GRADE 4 • 4.CE.3.a

4.CE.3.a "Estimate and determine the sum or difference of two fractions (proper or improper) and/or mixed numbers, having like denominators limited to 2, 3, 4, 5, 6, 8, 10, and 12 (e.g., $38 + 38$, $215 + 45$...)"

NAME _____

DATE _____

SAME DENOMINATOR STEPS

When fractions have the same denominator, add or subtract the numerators and keep the denominator. Estimate first with 0, $1/2$, 1, or a nearby whole number, then simplify your exact answer. If you subtract mixed numbers and the top fraction is too small, regroup one whole as a fraction with the same denominator.

WORKED EXAMPLE

$$2 \frac{5}{12} + 1 \frac{7}{12}$$

1. Add the whole numbers: $2 + 1 = 3$.
2. Add the fractions: $5/12 + 7/12 = 12/12$.
3. Rename $3 + 12/12$ as 4.

Answer: 4

PRACTICE 6 problems

- 1** Estimate, then find the exact sum. Simplify.
 $3/8 + 4/8$

ANSWER _____

- 2** Estimate, then find the exact difference.
Simplify. $11/10 - 3/10$

ANSWER _____

- 3** Estimate, then find the exact sum. Simplify.
 $1 \frac{3}{4} + 2 \frac{2}{4}$

ANSWER _____

- 4** Estimate, then find the exact sum. Simplify.
 $5/6 + 9/6$

ANSWER _____

- 5** Estimate, then find the exact difference.
Simplify. $4 \frac{1}{5} - 2 \frac{4}{5}$

ANSWER _____

- 6** Estimate, then find the exact difference.
Simplify. $17/12 - 5/12$

ANSWER _____

APPLY IT Show your work

- 1** Jordan practiced guitar for $1\frac{7}{10}$ hours on Saturday and $2\frac{6}{10}$ hours on Sunday for the school talent show. Estimate the total time, then find the exact total time.

WORK SPACE

ANSWER _____

- 2** A video game system has $6\frac{1}{4}$ GB of free space. A new game update uses $2\frac{3}{4}$ GB. Estimate how much space will be left, then find the exact amount.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Estimate, then solve: $6\frac{1}{8} - 2\frac{6}{8}$. Explain why you need to regroup.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Estimate, then find the exact sum. Simplify. $\frac{3}{8} + \frac{4}{8}$	Estimate: about 1. Exact sum: $\frac{7}{8}$
2	Estimate, then find the exact difference. Simplify. $\frac{11}{10} - \frac{3}{10}$	Estimate: about $\frac{1}{2}$. Exact difference: $\frac{4}{5}$
3	Estimate, then find the exact sum. Simplify. $1\frac{3}{4} + 2\frac{2}{4}$	Estimate: about 4. Exact sum: $4\frac{1}{4}$
4	Estimate, then find the exact sum. Simplify. $\frac{5}{6} + \frac{9}{6}$	Estimate: about $2\frac{1}{2}$. Exact sum: $2\frac{1}{3}$
5	Estimate, then find the exact difference. Simplify. $4\frac{1}{5} - 2\frac{4}{5}$	Estimate: about 1. Exact difference: $1\frac{2}{5}$
6	Estimate, then find the exact difference. Simplify. $\frac{17}{12} - \frac{5}{12}$	Estimate: about 1. Exact difference: 1

PART 2 • APPLY IT

- 4 $\frac{3}{10}$ hours** An estimate is about 4 hours. Add the whole numbers and the tenths, then rename $\frac{13}{10}$ as $1\frac{3}{10}$.
- 3 $1\frac{1}{2}$ GB** An estimate is about 3 GB. Regroup $6\frac{1}{4}$ as $5\frac{5}{4}$, then subtract $2\frac{3}{4}$.

CHALLENGE

About 3. I regrouped $6\frac{1}{8}$ as $5\frac{9}{8}$ because $\frac{1}{8}$ is less than $\frac{6}{8}$. The difference is $3\frac{3}{8}$.

Accept reasonable benchmark estimates that are supported by the student's rounding choices. Exact answers should be simplified, though equivalent fraction forms may be accepted when the value is correct.