

Fraction Trail Mix

Add and subtract mixed numbers with like denominators.

GRADE 4 • 4.CE.3.b

4.CE.3.b "Estimate, represent, solve, and justify solutions to single-step contextual problems using addition and subtraction with fractions (proper or improper) and/or mixed numbers, having like denominators limited to 2, 3, 4, 5, 6, 8, 10, and 12..."

NAME _____

DATE _____

SAME DENOMINATOR STRATEGY

When denominators are the same, add or subtract the numerators and keep the denominator. If you need to subtract a larger fraction, trade 1 whole for a fraction with the same denominator, then simplify your answer.

WORKED EXAMPLE

Solve: $5 \frac{1}{8} - 2 \frac{6}{8}$

1. Trade 1 whole: $5 \frac{1}{8} = 4 \frac{9}{8}$.
2. Subtract: $4 \frac{9}{8} - 2 \frac{6}{8} = 2 \frac{3}{8}$.
3. $\frac{3}{8}$ is already simplified.

Answer: $2 \frac{3}{8}$

PRACTICE 6 problems

1 Solve and simplify: $\frac{3}{5} + \frac{1}{5}$

ANSWER _____

2 Solve and simplify: $\frac{7}{10} - \frac{3}{10}$

ANSWER _____

3 Solve and simplify: $1 \frac{2}{3} + \frac{2}{3}$

ANSWER _____

4 Solve and simplify: $2 \frac{1}{4} + 1 \frac{2}{4}$

ANSWER _____

5 Solve and simplify: $4 \frac{1}{6} - 2 \frac{5}{6}$

ANSWER _____

6 Solve and simplify: $3 \frac{3}{12} + 1 \frac{8}{12}$

ANSWER _____

APPLY IT Show your work

1

At a game design club, Leo spent $1\frac{4}{5}$ hours making a character and $2\frac{3}{5}$ hours testing it. Estimate the total by rounding each mixed number to the nearest whole. Then find the exact total time. Simplify.

WORK SPACE

ANSWER _____

2

A garden team has $5\frac{1}{4}$ yards of compost. They put $2\frac{3}{4}$ yards in planters. How many yards of compost are left? Show how you regroup and simplify.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A student says that $4\frac{1}{3} - 2\frac{5}{3} = 2\frac{4}{3}$. Is the student correct? Explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Solve and simplify: $\frac{3}{5} + \frac{1}{5}$	$\frac{4}{5}$
2	Solve and simplify: $\frac{7}{10} - \frac{3}{10}$	$\frac{2}{5}$
3	Solve and simplify: $1\frac{2}{3} + \frac{2}{3}$	$2\frac{1}{3}$
4	Solve and simplify: $2\frac{1}{4} + 1\frac{2}{4}$	$3\frac{3}{4}$
5	Solve and simplify: $4\frac{1}{6} - 2\frac{5}{6}$	$1\frac{1}{3}$
6	Solve and simplify: $3\frac{3}{12} + 1\frac{8}{12}$	$4\frac{11}{12}$

PART 2 • APPLY IT

1. **Estimate: 5 hours. Exact total: $4\frac{2}{5}$ hours.** Round $1\frac{4}{5}$ to 2 and $2\frac{3}{5}$ to 3 for an estimate of 5 hours. Add the exact times: $1\frac{4}{5} + 2\frac{3}{5} = 4\frac{2}{5}$ hours.
2. **$2\frac{1}{2}$ yards** Regroup $5\frac{1}{4}$ as $4\frac{5}{4}$. Then subtract: $4\frac{5}{4} - 2\frac{3}{4} = 2\frac{2}{4} = 2\frac{1}{2}$ yards.

CHALLENGE

No. Regroup $4\frac{1}{3}$ as $2\frac{7}{3}$, then subtract: $2\frac{7}{3} - 2\frac{5}{3} = \frac{2}{3}$.

Accept correct regrouping shown in any valid form, such as trading one whole for $\frac{8}{8}$. Require simplified final answers, and accept 5 hours as the estimate in the first word problem.