

Fraction Trail Mix

Add, subtract, simplify, and model fractions.

GRADE 4 • 4.CE.3

4.CE.3 "The student will estimate, represent, solve, and justify solutions to single-step problems, including those in context, using addition and subtraction of fractions (proper, improper, and mixed numbers with like denominators of 2, 3, 4, 5..."

NAME _____

DATE _____

SAME DENOMINATOR STRATEGY

When fractions have the same denominator, add or subtract the numerators and keep the denominator. Simplify your answer. When subtracting mixed numbers, trade 1 whole for fractional parts if you need more parts to subtract.

WORKED EXAMPLE

$$3 \frac{5}{12} + 4 \frac{1}{12}$$

1. Add the fractional parts: $\frac{5}{12} + \frac{1}{12} = \frac{6}{12}$.
2. Write the sum: $3 \frac{9}{12}$.
3. Simplify $\frac{9}{12}$ to $\frac{3}{4}$.

Answer: $3 \frac{3}{4}$

PRACTICE 6 problems

1 $\frac{3}{5} + \frac{1}{5} = \underline{\hspace{2cm}}$

ANSWER _____

2 $1 \frac{1}{6} - \frac{5}{6} = \underline{\hspace{2cm}}$

ANSWER _____

3 $2 \frac{3}{4} + \frac{1}{4} = \underline{\hspace{2cm}}$

ANSWER _____

4 $4 \frac{3}{10} - 1 \frac{7}{10} = \underline{\hspace{2cm}}$

ANSWER _____

5 $\frac{7}{8} + \frac{5}{8} = \underline{\hspace{2cm}}$

ANSWER _____

6 Use repeated addition to model and solve:
 $6 \times \frac{1}{3} = \underline{\hspace{2cm}}$

ANSWER _____

APPLY IT Show your work

- 1** Ava spent $\frac{5}{8}$ hour building a video game level and $\frac{3}{8}$ hour testing it. How much time did she spend altogether? Write an equation and explain how the denominators helped you.

WORK SPACE

ANSWER _____

- 2** At game club, 8 players each eat $\frac{1}{6}$ of a snack tray. How many snack trays do they eat altogether? Show a repeated-unit-fraction model, then solve.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Estimate, then solve: $5\frac{1}{6} - 2\frac{5}{6}$. Explain how you regrouped.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$3/5 + 1/5 = \underline{\hspace{1cm}}$	4/5
2	$11/6 - 5/6 = \underline{\hspace{1cm}}$	1
3	$2\ 3/4 + 1/4 = \underline{\hspace{1cm}}$	3
4	$4\ 3/10 - 1\ 7/10 = \underline{\hspace{1cm}}$	2 3/5
5	$7/8 + 5/8 = \underline{\hspace{1cm}}$	1 1/2
6	Use repeated addition to model and solve: $6 \times 1/3 = \underline{\hspace{1cm}}$	2

PART 2 • APPLY IT

- 1 hour** $5/8 + 3/8 = 8/8 = 1$. Because the denominators are the same, add the numerators and keep the denominator.
- 1 1/3 snack trays** $8 \times 1/6 = 8/6 = 1\ 1/3$. A repeated-unit-fraction model has eight $1/6$ pieces.

CHALLENGE

Estimate: 2. Exact difference: 2 1/3. Trade 1 whole from 5 to make 4 7/6, then subtract 2 5/6.

Accept equivalent fraction forms when they are correct, but students should simplify final fractional answers. For the challenge estimate, accept a reasonable estimate of 2 with a clear explanation.