

Fraction Building Lab

Build, add, and subtract equal-size fraction pieces.

GRADE 4 • 4.NF.B

CCSS.Math.Content.4.NF.B "Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers."

NAME _____

DATE _____

BUILD WITH UNIT FRACTIONS

A fraction is made from copies of a unit fraction with the same denominator. When fractions have the same denominator, add or subtract the numerators and keep the denominator.

WORKED EXAMPLE

Find $\frac{4}{13} + \frac{6}{13}$.

1. $\frac{4}{13}$ is 4 copies of $\frac{1}{13}$, and $\frac{6}{13}$ is 6 copies of $\frac{1}{13}$.
2. Add the copies: $4 + 6 = 10$.
3. Keep the denominator: $\frac{10}{13}$.

Answer: $\frac{10}{13}$

PRACTICE 6 problems

1 $\frac{1}{7} + \frac{2}{7} = ?$

ANSWER _____

2 $\frac{7}{9} - \frac{2}{9} = ?$

ANSWER _____

3 $3 \times \frac{1}{8} = ?$

ANSWER _____

4 Write $\frac{5}{11}$ as a sum of unit fractions.

ANSWER _____

5 $\frac{7}{12} + \frac{1}{12} = ?$

ANSWER _____

6 $\frac{9}{14} - \frac{2}{14} = ?$

ANSWER _____

APPLY IT Show your work

- 1** At the game club, Amir earned $\frac{3}{8}$ of the points needed to unlock a new game on Monday and $\frac{2}{8}$ on Tuesday. What fraction of the needed points has he earned?

WORK SPACE

ANSWER _____

- 2** Riley read $\frac{7}{12}$ of a comic book. What fraction of the comic book is left unread?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Lee says that $\frac{7}{15} + \frac{7}{15} = \frac{14}{30}$ because $7 + 7 = 14$ and $15 + 15 = 30$. Is Lee correct? Explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$1/7 + 2/7 = ?$	3/7
2	$7/9 - 2/9 = ?$	5/9
3	$3 \times 1/8 = ?$	3/8
4	Write $5/11$ as a sum of unit fractions.	$1/11 + 1/11 + 1/11 + 1/11 + 1/11$
5	$7/12 + 1/12 = ?$	8/12
6	$9/14 - 2/14 = ?$	7/14

PART 2 • APPLY IT

1. **5/8** Add the fractions because Amir earned both parts. $3/8 + 2/8 = 5/8$.
2. **5/12** A whole comic book is $12/12$. Subtract: $12/12 - 7/12 = 5/12$.

CHALLENGE

No. The denominator tells the size of each piece, so it stays 15. $7/15 + 7/15 = 14/15$.

Accept equivalent fractions when they represent the same amount. For same-denominator addition and subtraction, students should keep the denominator and combine only the numerators.