

Fraction Bar Quest

Add and subtract fractions that name the same whole.

GRADE 5 • TEKS 5.3.H

5.3.H "represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations;"

NAME _____

DATE _____

MATCH THE PARTS

Fractions must name parts of same-size wholes. A quick sketch of equal-length fraction bars can help you see a common denominator. Rename each fraction with a common denominator, then add or subtract the numerators and keep the denominator.

WORKED EXAMPLE

Find $\frac{2}{7} + \frac{4}{9}$.

1. Use bars with 63 equal parts: shade 18 parts for $\frac{2}{7}$ and 28 parts for $\frac{4}{9}$.
2. $\frac{2}{7} = \frac{18}{63}$ and $\frac{4}{9} = \frac{28}{63}$.
3. $\frac{18}{63} + \frac{28}{63} = \frac{46}{63}$.

Answer: $\frac{46}{63}$

PRACTICE 6 problems

- 1** Find $\frac{1}{6} + \frac{3}{8}$. A fraction-bar sketch may help.

ANSWER _____

- 2** Find $\frac{5}{12} - \frac{1}{8}$. A fraction-bar sketch may help.

ANSWER _____

- 3** Find $\frac{3}{10} + \frac{1}{4}$.

ANSWER _____

- 4** Find $\frac{7}{8} - \frac{1}{6}$.

ANSWER _____

- 5** Find $\frac{5}{6} + \frac{3}{10}$. Write a mixed number if needed.

ANSWER _____

- 6** Find $\frac{11}{12} - \frac{3}{10}$.

ANSWER _____

APPLY IT Show your work

- 1** Leo spent $\frac{3}{8}$ of an hour building a video game level and $\frac{1}{6}$ of an hour testing it. What fraction of an hour did he spend building and testing?

WORK SPACE

ANSWER _____

- 2** For a comic poster, $\frac{5}{6}$ of one whole poster board is planned for drawings. A title box takes $\frac{1}{4}$ of the whole poster board from that planned area. What fraction of the poster board is left for drawings?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Find $\frac{5}{8} + \frac{1}{3} - \frac{1}{4}$. Show equivalent fractions with a common denominator before you calculate.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find $\frac{1}{6} + \frac{3}{8}$. A fraction-bar sketch may help.	$\frac{13}{24}$
2	Find $\frac{5}{12} - \frac{1}{8}$. A fraction-bar sketch may help.	$\frac{7}{24}$
3	Find $\frac{3}{10} + \frac{1}{4}$.	$\frac{11}{20}$
4	Find $\frac{7}{8} - \frac{1}{6}$.	$\frac{17}{24}$
5	Find $\frac{5}{6} + \frac{3}{10}$. Write a mixed number if needed.	$1 \frac{2}{15}$
6	Find $\frac{11}{12} - \frac{3}{10}$.	$\frac{37}{60}$

PART 2 • APPLY IT

1. **$\frac{13}{24}$ hour** Rename the fractions as $\frac{9}{24}$ and $\frac{4}{24}$. Add to get $\frac{13}{24}$ hour.
2. **$\frac{7}{12}$ of the poster board** Rename $\frac{5}{6}$ as $\frac{10}{12}$ and $\frac{1}{4}$ as $\frac{3}{12}$. Subtract to get $\frac{7}{12}$.

CHALLENGE

 $\frac{17}{24}$

Accept equivalent fractions that are simplified correctly. Accept fraction-bar models when the bars represent equal-size wholes and the shading matches the fractions.