Standards INSTITUTE

# Bridging the Gap for Language Minority Students and ELLs in Math

Notetaking Guide

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|---|---|
| Ideas/concepts/terms related to English language learning: | Things to keep in mind about my own students: |
| Thoughts on *scaffolds* that might be useful: | Things that are good for many students but might be *essential* for ELLs: |
| Things to look up later: | Other/Misc./Don't-forgets" |

| Scaffold/Idea | Which MPs? | Speaking | Reading | Writing | Listening |
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# Grade 4: Using Pictures and Manipulatives to Add and Subtract Fractions with the Same Units

## Today's Objective

*I will use pictures and manipulatives to show how to add and subtract fractions using the same units.*

Opening Exercise: Count by equivalent fractions.

Use this number line to help count by eighths.


How many students did we need to count to one whole when we counted in fourths? Write your answer in this box.

## Compare Fractions

Vocabulary word:
*partition*
What part of speech is *partition?* _____
The definition of partition is: ___ _____ _____ _____.

Use this space to draw two rectangles. These will be our area models.

Partition your first area model to show $\frac{1}{2}$.

Partition your second area model to show $\frac{2}{5}$.

Partition area models to compare $\frac{1}{5}$ and $\frac{3}{10}$.

Partition area models to compare $\frac{1}{4}$ and $\frac{5}{8}$.

Partition area models to compare $\frac{1}{3}$ and $\frac{3}{4}$.

## Application Problem

How did I compare $\frac{1}{2}$ and $\frac{2}{5}$ ?
I can use these sentence starters to explain.
First, I ___.
Then, I ____.
Next, I ____.
Finally, I _____.

Keisha ran $\frac{5}{6}$ mile in the morning.
She ran $\frac{2}{3}$ mile in the afternoon.
Which distance was longer?

Did Keisha run farther in the morning or in the afternoon?

Complete these sentences:

First, I…

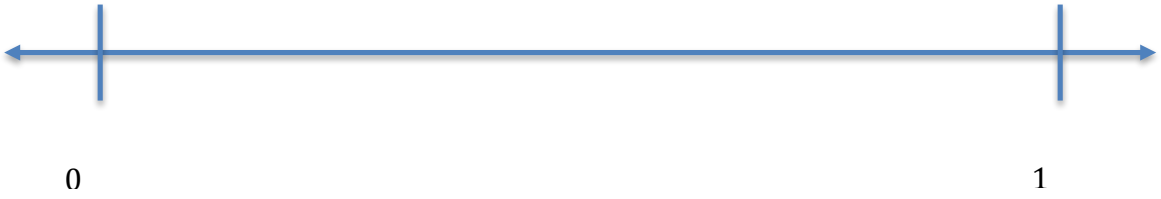
Then, I…

Next, I…

Finally, I…

Problem 1

Divide this number line into sixths.




What is the subtraction sentence? Write it here.

Now try $\frac{7}{4} - \frac{5}{4}$.

Problem 2

Solve this in unit form, and write a number sentence using fractions.

$\frac{10}{6} - \frac{2}{6} =$

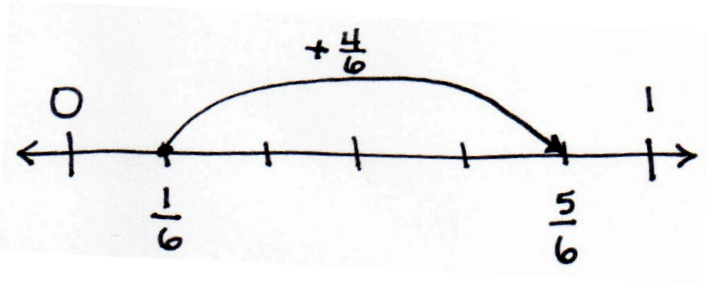
Vocabulary word:
*decompose*
What part of speech is *decompose?* _____
The definition of *decompose* is: ___ _____ _____ into _____ _____.

Now try this. Solve this in unit form, and write a number sentence using fractions.

$\frac{9}{5} - \frac{3}{5} =$

Problem 3
Let's look at this example again:

$\frac{1}{6} + \frac{4}{6} = \frac{5}{6}$



In the same way, now show:

$\frac{2}{8}+\frac{3}{8}=\frac{5}{8}$

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Problem 4

Vocabulary word:
*sum*
What part of speech is *sum?* _____
The definition of *sum* is: ___ _____ ___ _____.

Use a number bond to decompose the sum into a whole and some parts.

$\frac{5}{4}+\frac{2}{4}=\frac{7}{4}$

Use a number bond to decompose the sum into a whole and some parts.

$\frac{6}{6}+\frac{4}{6}=\frac{10}{6}$

## Problem Set

Name _____ Date _____

1. Solve.

   a. 3 fifths – 1 fifth = _____

   b. 5 fifths – 3 fifths = _____

   c. 3 halves – 2 halves = _____

   d. 6 fourths – 3 fourths = _____

2. Solve.

   a. $\frac{5}{6} - \frac{3}{6}$

   b. $\frac{5}{6} - \frac{3}{6}$

   c. $\frac{3}{10} - \frac{3}{10}$

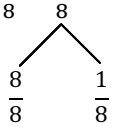
   d. $\frac{5}{5} - \frac{4}{5}$

   e. $\frac{5}{4} - \frac{4}{4}$

   f. $\frac{5}{4} - \frac{3}{4}$

3. Solve. Use a number bond to show how to convert the difference to a mixed number. Problem (a) has been completed for you.

   a. $\frac{12}{8} - \frac{3}{8} = \frac{9}{8} = 1\frac{1}{8}$

   b. $\frac{12}{8} - \frac{3}{8} =$

   c. $\frac{9}{5} - \frac{3}{5}$

   d. $\frac{14}{8} - \frac{3}{8}$

   e. $\frac{8}{4} - \frac{2}{4}$

   f. $\frac{15}{10} - \frac{3}{10}$

4. Solve. Write the sum in unit form.

   a. 2 fourths + 1 fourth = _____

   b. 4 fifths + 3 fifths = _____

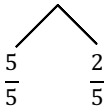
5. Solve.

   a. $\frac{2}{8} + \frac{5}{8}$

   b. $\frac{4}{12} + \frac{5}{12}$

6. Solve. Use a number bond to decompose the sum. Record your final answer as a mixed number. Problem (a) has been completed for you.

   a. $\frac{3}{5} + \frac{4}{5} = \frac{7}{5} = 1\frac{2}{5}$

   b. $\frac{4}{4} + \frac{3}{4}$

   c. $\frac{6}{9} + \frac{6}{9}$

   d. $\frac{7}{10} + \frac{6}{10}$

   e. $\frac{5}{6} + \frac{7}{6}$

   f. $\frac{9}{8} + \frac{5}{8}$

7. Solve. Then use a number line to model your answer.

   a. $\frac{7}{4} - \frac{5}{4}$

   b. $\frac{5}{4} + \frac{2}{4}$

Student Debrief

The _____ model helps me add fractions because…

Number bonds help to decompose fractions into mixed numbers because…

When adding fractions, it is important to remember to…

Exit Ticket

Solve. Use a number bond to decompose the difference. Record your final answer as a mixed number. Use a visual representation (like a number line) to show your thinking.

$$\frac{16}{9} - \frac{5}{9}$$

Solve. Use a number bond to decompose the sum. Record your final answer as a mixed number. Use a visual representation (like a number line) to show your thinking.

$$\frac{5}{12} + \frac{10}{12}$$