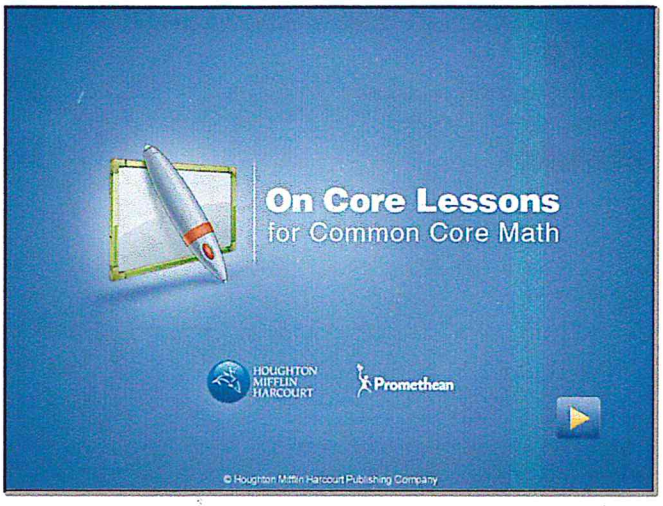


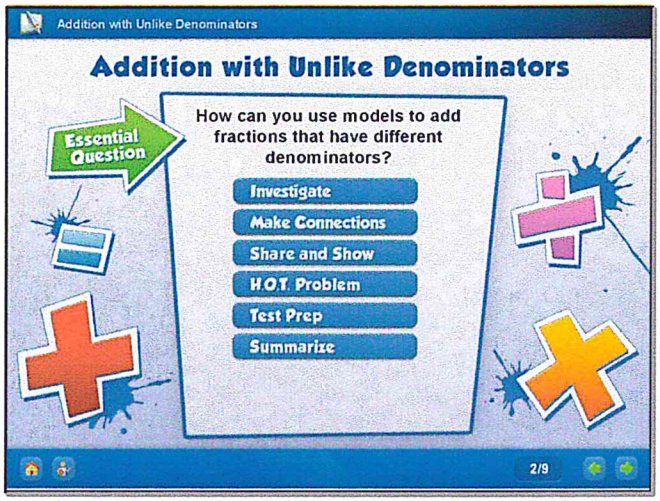


Addition with Unlike Denominators

Warm Up:

Create equations that equal 36.

You may use addition, subtraction, multiplication and division facts. You may also use a combination of operations to write equations with parentheses, brackets and braces.

Remember order of operations is IMPORTANT!

Addition with Unlike Denominators

Vocabulary:

$$\frac{5}{10}$$

Circle the numerator.

Draw a box around the denominator.

Write the fraction in simplest form.

$$\frac{1}{2} \quad \frac{3}{4} \quad \frac{2}{3} \quad \frac{1}{4}$$

Which two fractions have common denominators?

Addition with Unlike Denominators

Prior Knowledge

$$\frac{2}{6} + \frac{3}{6} =$$

Addition with Unlike Denominators

Investigate

**A.** Find $\frac{1}{2}+\frac{1}{4}$. Place the $\frac{1}{2}$ strip and the $\frac{1}{4}$ strip under the 1-whole strip.

**B.**

3/9

Addition with Unlike Denominators

$$\frac{1}{2} + \frac{1}{3} =$$

http://www-k6.thinkcentral.com/content/hsp/math/hspmath/na/common/itools_int_9780

Addition with Unlike Denominators

Make Connections

Use fraction strips to solve. $\frac{3}{5}+\frac{1}{2}$

**Step 1** Place three $\frac{1}{5}$ fractions under the 1-whole strip. Then place a $\frac{1}{2}$ fraction strip beside the three $\frac{1}{5}$ strips.

**Step 2**

Math Talk

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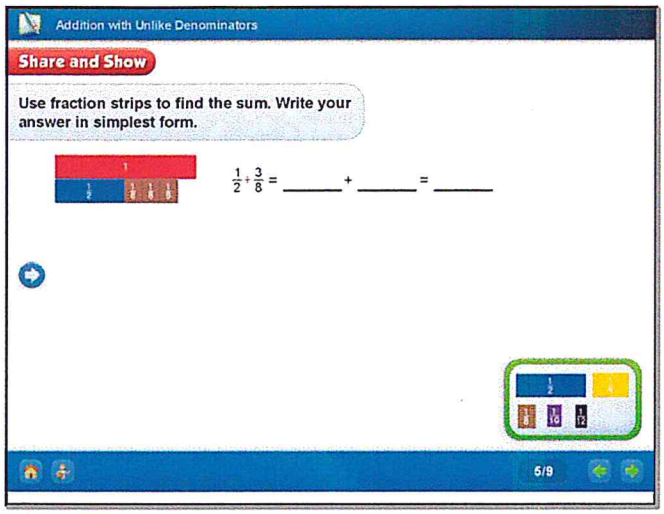
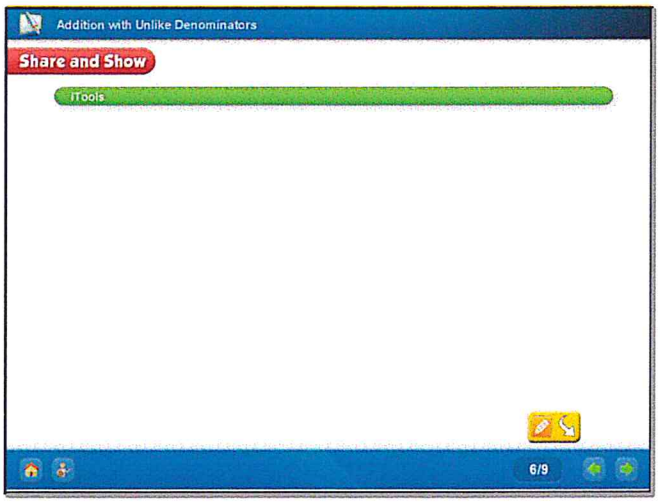



Addition with Unlike Denominators

## Guided Practice

**1. Share and Show** – Use fraction strips to find the sum. Write your answer in simplest form.

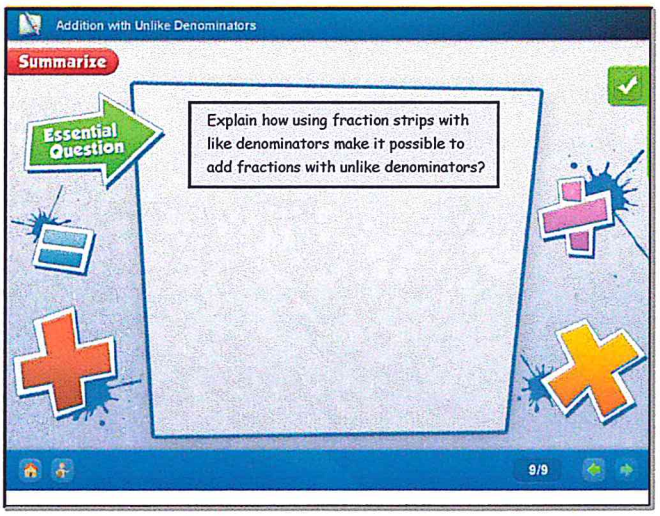
ALL Sara/Clara/Autumn Ronin/Matty

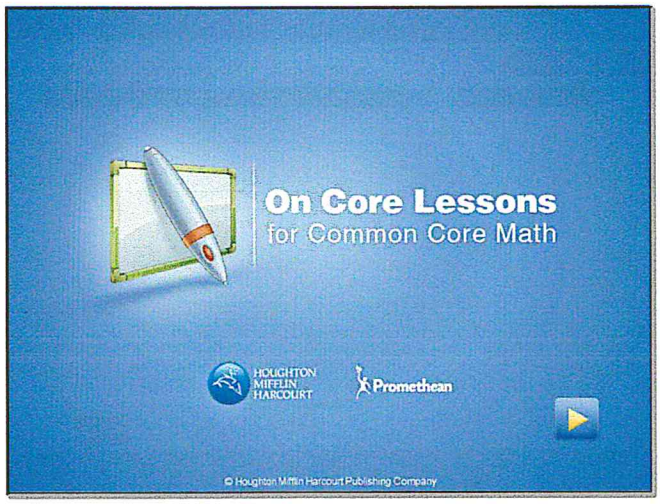
**2. Task Cards** – Read and solve each task card. Use fraction strips to model the problems and write the answer in simplest form. Create your own problem and switch with a partner group.

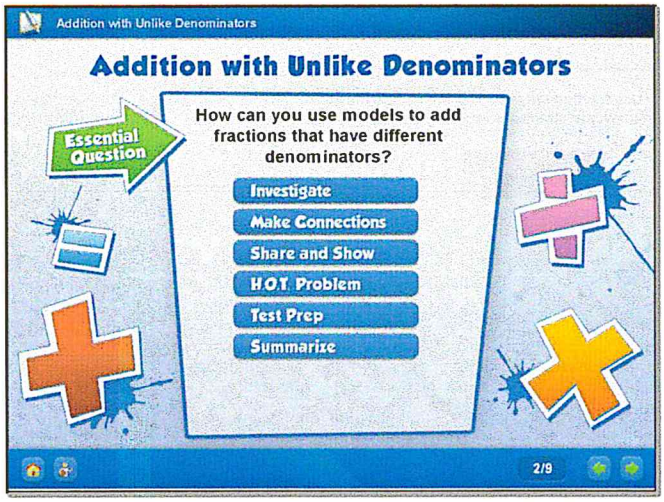
Charlie/Devin Domenico/Dominic
Evan/Bennett Billy/Collin

**3. ThinkCentral–** Mega Math (Fraction Action– Fraction Flare Up: 1. Add Unlike Fractions)

Brody/Mark Jenny/Grace Camille/Molly
Abigail/Caidyn Julia/Kelly






Addition with Unlike Denominators

Warm Up:

Solve the problems below.

$\begin{array}{r} 234 \\ \times 45 \end{array}$ $\begin{array}{r} 871 \\ \times 23 \end{array}$ $3\overline{)825}$ $23\overline{)1{,}196}$

Addition with Unlike Denominators

Vocabulary:

$$\frac{3}{6}$$

Numerator

Denominator

Simplest Form

Common Denominator

What is an equivalent fraction?

What is an equivalent fraction to $\frac{3}{6}$ ?

Addition with Unlike Denominators

Show What You Know!

Model the problem below.

$$\frac{2}{6} + \frac{1}{3} =$$

Addition with Unlike Denominators

H.O.T. Problem

Pose a Problem

$\frac{1}{3}+\frac{1}{4}=\frac{7}{12}$ Maya uses $\frac{7}{12}$ cup of ingredients.

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Addition with Unlike Denominators

Problem Solving

H.O.T. Pose a Problem

15. Maya makes trail mix by combining $\frac{1}{3}$ cup of mixed nuts and $\frac{1}{4}$ cup of dried fruit. What is the total amount of ingredients in her trail mix?

$\frac{1}{3}+\frac{1}{4}=\frac{7}{12}$

Maya uses $\frac{7}{12}$ cup of ingredients

Write a new problem using different amounts for each ingredient. Each amount should be a fraction with a denominator of 2, 3, or 4. Then use fraction strips to solve your problem.

Pose a problem.

Solve your problem. Draw a picture of the fraction strips you use to solve the problem.

Addition with Unlike Denominators

Extend:

Suppose Maya has three ingredients

$$\frac{1}{2} + \frac{1}{4} + \frac{1}{6} =$$

Addition with Unlike Denominators

## Guided / Independent Practice

**Share and Show** – Use fraction strips to find the sum. Write your answer in simplest form.

ALL

**Task Cards** – Read and solve each task card. Use fraction strips to model the problems and write the answer in simplest form. Create your own problem and switch with a partner group.

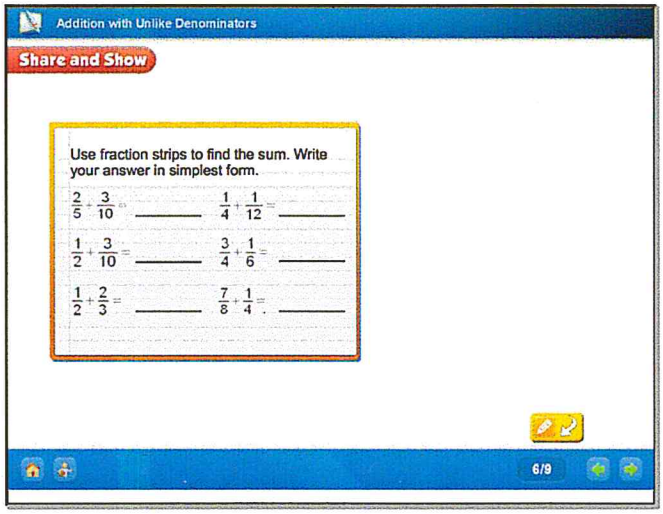
Brody/Mark  Jenny/Grace  Camille/Molly
Abigail/Caidyn  Julia/Kelly

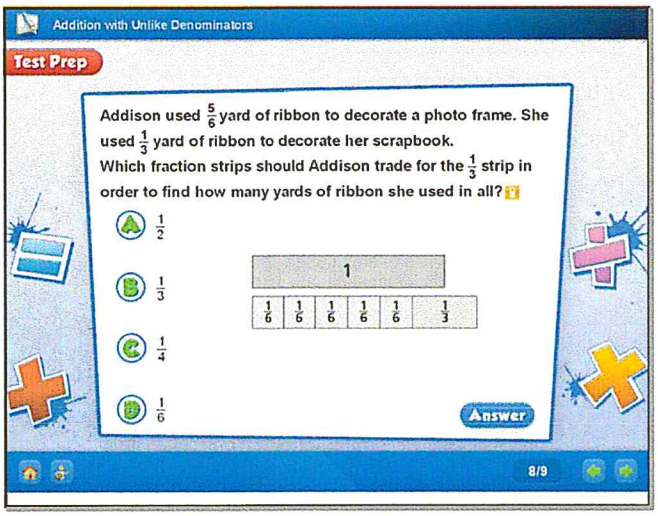
**ThinkCentral** – Soar to Success (20.28 – Add Unlike Fractions)

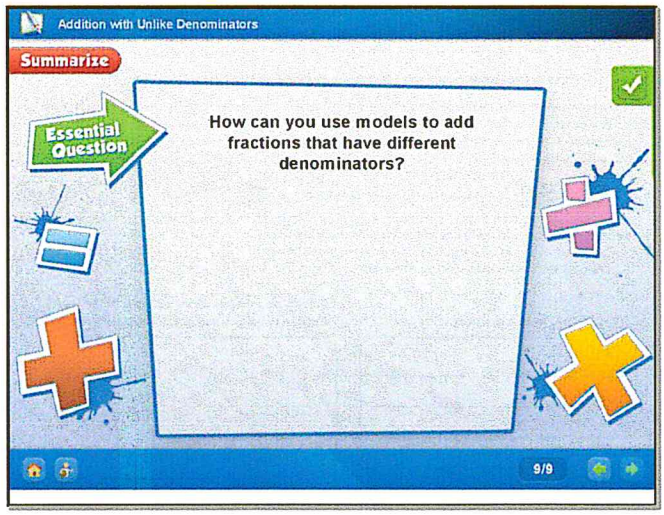
Sara/Clara/Autumn  Ronin/Matty

**Plan a Schedule** – Add and subtract fractions with unlike denominators (Plan a schedule task sheet)  **OR**

**"What's the Sum?** – Add fractions with unlike denominators (game board and number tiles)  Charlie/Devin  Evan/Bennett  Domenico/Dominic  Billy/Collin



Name: _____

Lesson 6.1 Adding Fractions with Unlike Denominators

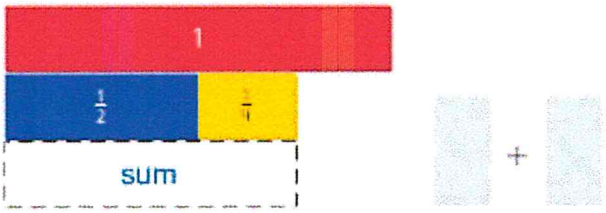
## Investigate

Hilary is making a tote bag for her friend. She uses $\frac{1}{2}$ yard of blue fabric and $\frac{1}{4}$ yard of red fabric. How much fabric does Hilary use?

**Materials** ■ fraction strips ■ MathBoard

**A.** Find $\frac{1}{2} + \frac{1}{4}$. Place a $\frac{1}{2}$ strip and a $\frac{1}{4}$ strip under the 1-whole strip on your MathBoard.

**B.** Find fraction strips, all with the same denominator, that are equivalent to $\frac{1}{2}$ and $\frac{1}{4}$ and fit exactly under the sum $\frac{1}{2} + \frac{1}{4}$. Record the addends, using like denominators.




**C.** Record the sum in simplest form. $\frac{1}{2} + \frac{1}{4} =$ _____

So, Hilary uses _____ yard of fabric.

Name: _____

Lesson 6.1 Adding Fractions with Unlike Denominators

## Make Connections

Sometimes, the sum of two fractions is greater than 1. When adding fractions with unlike denominators, you can use the 1-whole strip to help determine if a sum is greater than 1 or less than 1.

Use fraction strips to solve. $\frac{3}{5} + \frac{1}{2}$

**STEP 1**

Work with another student. Place three $\frac{1}{5}$ fraction strips under the 1-whole strip on your MathBoard. Then place a $\frac{1}{2}$ fraction strip beside the three $\frac{1}{5}$ strips.

**STEP 2**

Find fraction strips, all with the same denominator, that are equivalent to $\frac{3}{5}$ and $\frac{1}{2}$. Place the fraction strips under the sum. At the right, draw a picture of the model and write the equivalent fractions.

$\frac{3}{5} =$ _____ $\frac{1}{2} =$ _____

**STEP 3**

Add the fractions with like denominators. Use the 1-whole strip to rename the sum in simplest form.

**Think:** How many fraction strips with the same denominator are equal to 1 whole?

$\frac{3}{5} + \frac{1}{2} =$ _____ + _____

$=$ _____, or _____

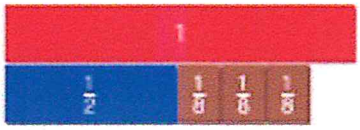
Name: _____

Lesson 6.1 Adding Fractions with Unlike Denominators

## Share and Show MATH BOARD

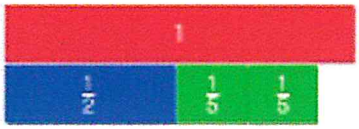
Use fraction strips to find the sum. Write your answer in simplest form.

1.




$\frac{1}{2} + \frac{3}{8} =$ _____ + _____ = _____

2.




$\frac{1}{2} + \frac{2}{5} =$ _____ + _____ = _____

3.

$\frac{3}{8} + \frac{1}{4} =$ _____ + _____ = _____

4.

$\frac{3}{4} + \frac{1}{3} =$ _____ + _____ = _____

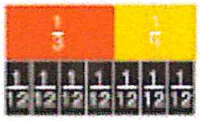
Name: _____

Lesson 6.1 Adding Fractions with Unlike Denominators

## Problem Solving

### H.O.T. Pose a Problem

15. Maya makes trail mix by combining $\frac{1}{3}$ cup of mixed nuts and $\frac{1}{4}$ cup of dried fruit. What is the total amount of ingredients in her trail mix?




$\frac{1}{3} + \frac{1}{4} = \frac{7}{12}$

Maya uses $\frac{7}{12}$ cup of ingredients.

Write a new problem using different amounts for each ingredient. Each amount should be a fraction with a denominator of 2, 3, or 4. Then use fraction strips to solve your problem.

**Pose a problem.**

_____

_____

_____

_____

_____

**Solve your problem. Draw a picture of the fraction strips you use to solve the problem.**

Name: _____

Lesson 6.1 Adding Fractions with Unlike Denominators

Use fraction strips to find the sum. Write your answer in simplest form.

5. $\frac{2}{5} + \frac{3}{10} =$ _____

6. $\frac{1}{4} + \frac{1}{12} =$ _____

7. $\frac{1}{2} + \frac{3}{10} =$ _____

8. $\frac{2}{3} + \frac{1}{6} =$ _____

9. $\frac{5}{8} + \frac{1}{4} =$ _____

10. $\frac{1}{2} + \frac{1}{5} =$ _____

11. $\frac{3}{4} + \frac{1}{6} =$ _____

12. $\frac{1}{2} + \frac{2}{3} =$ _____

13. $\frac{7}{8} + \frac{1}{4} =$ _____