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!

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?
Prior Knowledge

\[
\frac{2}{6} + \frac{3}{6} =
\]

Make Connections

Use fraction strips to solve, \( \frac{2}{5} + \frac{1}{3} \)

**Step 1** Place three \( \frac{1}{3} \) fractions under the 1-whole strip. Then place a \( \frac{2}{3} \) fraction strip beside the three \( \frac{1}{3} \) strips.

**Step 2**
Guided Practice

1. **Share and Show** - Use fraction strips to find the sum. Write your answer in simplest form.
   - ALL: Sara/Clara/Autumn/Rein/Metty

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
   - Domenic/Dominic
   - Evan/Brendan
   - Billy/Collin

3. **ThinkCentral** - Mega Math (Fraction Action - Fraction Flare Up: 1. Add Unlike Fractions)
   - Brody/Mark
   - Jeni/Gianna
   - Abigail/Gaity
   - Julia/Kelli

**Essential Question:** Explain how using fraction strips with like denominators make it possible to add fractions with unlike denominators.
Warm Up:
Solve the problems below.

\[
\begin{align*}
234 \times 45 &= 10530 \\
871 \times 23 &= 19933 \\
3 \times 825 &= 2475 \\
33 \times 196 &= 6568
\end{align*}
\]

Vocabulary:
- Numerator
- Denominator
- Simplest Form
- Common Denominator

What is an equivalent fraction?
What is an equivalent fraction to \( \frac{3}{6} \)?
Show What You Know!
Model the problem below.
\[ \frac{2}{6} + \frac{1}{3} = \]

HOT Problem
Pose a Problem
\[ \frac{1}{3} + \frac{1}{4} + \frac{1}{12} \]
Maya uses \( \frac{1}{12} \) cup of ingredients.

Problem Solving
Pose a Problem
13. Maya makes the mix by combining \( \frac{1}{2} \) cup of mixed nuts and \( \frac{1}{3} \) cup of dried fruit. What is the total amount of ingredients in her final mix?

\[ \frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6} \]
Maya uses \( \frac{5}{6} \) cup of ingredients.

Extend:
Suppose Maya has three ingredients
\[ \frac{1}{2} + \frac{1}{4} + \frac{1}{6} = \]
**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/Kelly
- Abigail/Gary
- Julia/Kelly

**ThinkCentral** - See to Success (20.28 - Add Unlike Fractions)

- Sara/Clara/Autumn
- Reena/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/Dustin
- Domenico/Dominic
- Evan/Bennett
- Billy/Colin

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**Test Prep**

Addison used \( \frac{2}{3} \) yard of ribbon to decorate a photo frame. She used \( \frac{1}{4} \) yard of ribbon to decorate her scrapbook. Which fraction strips should Addison trade for the \( \frac{2}{3} \) strip in order to find how many yards of ribbon she used in all?

**Essential Question**

How can you use models to add fractions that have different 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.
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.

**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?
Lesson 6.1 Adding Fractions with Unlike Denominators

Share and Show

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

1. \[ \frac{1}{2} + \frac{3}{8} = \quad + \quad = \]

2. \[ \frac{1}{2} + \frac{2}{5} = \quad + \quad = \]

3. \[ \frac{3}{8} + \frac{1}{4} = \quad + \quad = \]

4. \[ \frac{3}{4} + \frac{1}{3} = \quad + \quad = \]
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.**
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. \( \frac{7}{8} + \frac{1}{4} = \)