

Name _____

Add Related Fractions

Essential Question How can you add fractions when one denominator is a multiple of the other?

When you add fractions, you find how many equal-size pieces there are in all. The denominator shows the size of the pieces. To add fractions with denominators that are not the same, first find equivalent fractions with the same denominator.

Activity

Materials ■ fraction strips

Find $\frac{1}{2} + \frac{2}{6}$.

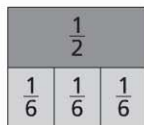
STEP 1 Model the problem.

Think: To add fractions, you need to count equal size pieces. The $\frac{1}{2}$ strip and the $\frac{1}{6}$ strip are different sizes.



STEP 2 Show $\frac{1}{2}$ using $\frac{1}{6}$ strips.

$$\frac{1}{2} = \frac{\quad}{6}$$

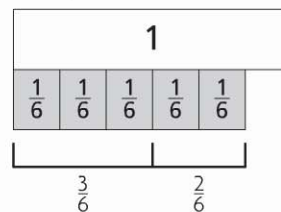


STEP 3 Add. Use the equivalent fraction you found. Find $\frac{3}{6} + \frac{2}{6}$.

How many $\frac{1}{6}$ strips are there?

Write the sum. $\frac{3}{6} + \frac{2}{6} =$ _____

So, $\frac{1}{2} + \frac{2}{6} =$ _____.



- **Describe** how the sizes of the $\frac{1}{2}$ strip and the $\frac{1}{6}$ strip compare. Then describe how the denominators of the fractions $\frac{1}{2}$ and $\frac{1}{6}$ are related.

Math Talk Explain how you know $\frac{1}{2}$ and $\frac{3}{6}$ are equivalent fractions.

Share and Show



1. Explain which fraction strips you could use to add $\frac{1}{3}$ and $\frac{3}{6}$.

2. Use fraction strips to add $\frac{1}{4} + \frac{2}{8}$.

$$\frac{1}{4} + \frac{2}{8} = \underline{\hspace{2cm}}$$

Add. Use fraction strips to help.

3. $\frac{1}{4} + \frac{1}{2} = \underline{\hspace{2cm}}$

4. $\frac{1}{2} + \frac{3}{8} = \underline{\hspace{2cm}}$

5. $\frac{1}{2} + \frac{3}{10} = \underline{\hspace{2cm}}$

On Your Own

Add. Use fraction strips to help.

6. $\frac{1}{3} + \frac{2}{6} = \underline{\hspace{2cm}}$

7. $\frac{1}{5} + \frac{3}{10} = \underline{\hspace{2cm}}$

8. $\frac{3}{8} + \frac{1}{4} = \underline{\hspace{2cm}}$

9. $\frac{5}{12} + \frac{1}{3} = \underline{\hspace{2cm}}$

10. $\frac{1}{3} + \frac{8}{12} = \underline{\hspace{2cm}}$

11. $\frac{8}{10} + \frac{1}{5} = \underline{\hspace{2cm}}$

Problem Solving



12. Paola used $\frac{1}{4}$ of a carton of eggs today and $\frac{4}{12}$ of the carton yesterday. What fraction of the carton of eggs did she use in all? Explain how you found your answer.
