Addition with Unlike Denominators

Karen is stringing a necklace with beads. She puts green beads on $\frac{1}{2}$ of the string and purple beads on $\frac{3}{10}$ of the string. How much of the string does Karen cover with beads?

You can use fraction strips to help you add fractions with unlike denominators. Trade fraction strips of fractions with unlike denominators for equivalent strips of fractions with like denominators.

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

$$\frac{1}{2}+\frac{3}{10}$$

- Step 1 Use a $\frac{1}{2}$ strip and three $\frac{1}{10}$ strips to model fractions with unlike denominators.
- Step 2 Trade the $\frac{1}{2}$ strip for five $\frac{1}{10}$ strips.

$$\frac{1}{2} + \frac{3}{10} = \frac{5}{10} + \frac{3}{10}$$

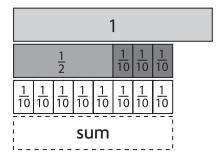
Step 3 Add the fractions with like denominators.

$$\frac{5}{10} + \frac{3}{10} = \frac{8}{10}$$

Step 4 Write the answer in simplest form.

$$\frac{8}{10} = \frac{4}{5}$$

So, Karen covers $\frac{4}{5}$ of the string with beads.



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

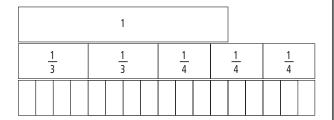
1.
$$\frac{3}{8} + \frac{3}{4}$$

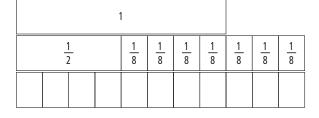
2.
$$\frac{2}{3} + \frac{1}{4}$$

3.
$$\frac{5}{6} + \frac{7}{12}$$

A Fraction Strip Above the Rest

Use fraction strips to find the sum. Add the fractions and answer the following questions.





- **1.** What fraction represents each fraction strip on the bottom row?
- **4.** What fraction represents each fraction strip on the bottom row?
- **2.** Write the total amount shown by the fraction strips on the bottom row.
- **5.** Write the total amount shown by the fraction strips on the bottom row.
- **3.** Write the equation shown by the fraction strips in the second row.
- **6.** Write the equation shown by the fraction strips in the second row.
- 7. Write Math If you add another $\frac{1}{4}$ to the second row of the model on the left, could you find the sum using the fraction strips in the second row?

8. Stretch Your Thinking If you add another $\frac{1}{8}$ to the second row of the model on the right, how would your equation and answer change?