

Name _____

Write Fractions as Sums

A **unit fraction** tells the part of the whole that 1 piece represents.

A unit fraction always has a numerator of 1.

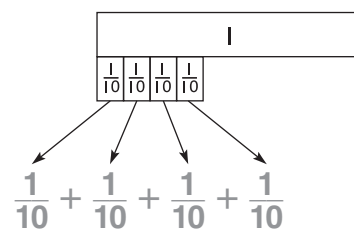
Bryan has $\frac{4}{10}$ pound of clay for making clay figures. He wants to use $\frac{1}{10}$ pound of clay for each figure. How many clay figures can he make?

Use fraction strips to write $\frac{4}{10}$ as a sum of unit fractions.

Step 1 Represent $\frac{4}{10}$ with fraction strips.

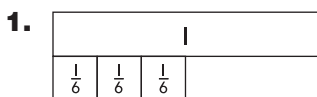
Step 2 Each $\frac{1}{10}$ is a unit fraction. Write a $\frac{1}{10}$ addend for each $\frac{1}{10}$ -strip you used to show $\frac{4}{10}$.

Step 3 Count the number of addends. The number of addends represents the number of clay figures Bryan can make.

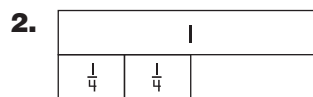


So, Bryan can make 4 clay figures.

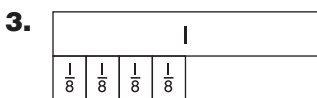
Write the fraction as the sum of unit fractions.



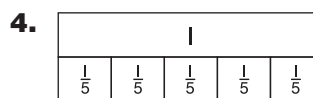
$$\frac{3}{6} = \underline{\quad} + \underline{\quad} + \underline{\quad}$$



$$\frac{2}{4} = \underline{\quad} + \underline{\quad}$$



$$\frac{4}{8} = \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad}$$



$$\frac{5}{5} = \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad}$$

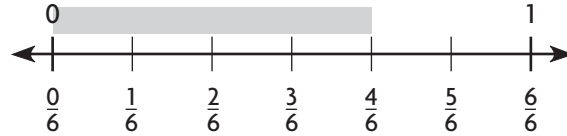
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Add Fractions Using Models

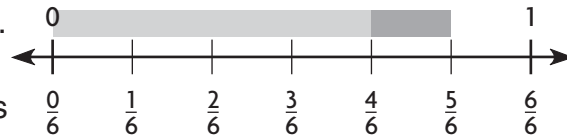
Fractions with like denominators have the same denominator. You can add fractions with like denominators using a number line.

Model $\frac{4}{6} + \frac{1}{6}$.

Step 1 Draw a number line labeled with sixths. Model the fraction $\frac{4}{6}$ by starting at 0 and shading 4 sixths.



Step 2 Add the fraction $\frac{1}{6}$ by shading 1 more sixth.



Step 3 How many sixths are there in all? **5** sixths
Write the number of sixths as a fraction.

$$5 \text{ sixths} = \frac{5}{6} \quad \frac{4}{6} + \frac{1}{6} = \frac{5}{6}$$

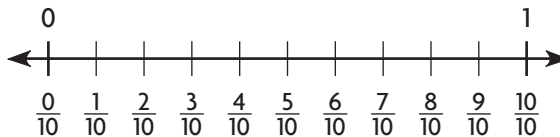
1. Model $\frac{1}{5} + \frac{4}{5}$.

$$\frac{1}{5} + \frac{4}{5} = \underline{\hspace{2cm}}$$

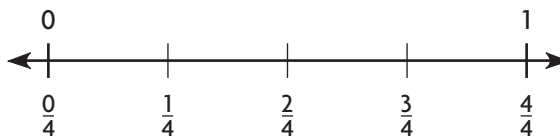


Find the sum. Use a model to help.

2. $\frac{2}{10} + \frac{4}{10}$



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



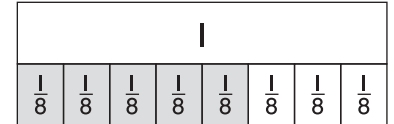
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Subtract Fractions Using Models

You can subtract fractions with like denominators using fraction strips.

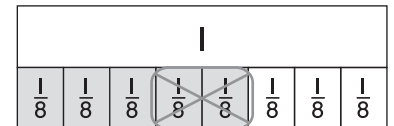
Model $\frac{5}{8} - \frac{2}{8}$.

Step 1 Shade the eighths you start with.
Shade 5 eighths.



Step 2 Subtract $\frac{2}{8}$.

Think: How many eighths are taken away?
Cross out 2 of the shaded eighths.



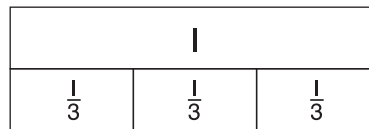
Step 3 Count the shaded eighths that remain.
There are 3 eighths remaining.

Step 4 Write the number of eighths that remain as a fraction.

$$3 \text{ eighths} = \frac{3}{8} \qquad \frac{5}{8} - \frac{2}{8} = \frac{3}{8}$$

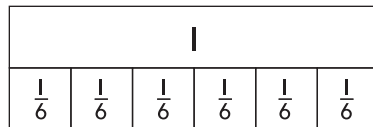
1. Model $\frac{3}{3} - \frac{2}{3}$.

$$\frac{3}{3} - \frac{2}{3} = \underline{\hspace{2cm}}$$

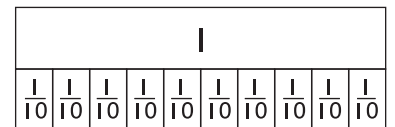


Subtract. Use fraction strips to help.

2. $\frac{5}{6} - \frac{1}{6}$



3. $\frac{6}{10} - \frac{3}{10}$



$$\frac{5}{6} - \frac{1}{6} = \underline{\hspace{2cm}}$$

$$\frac{6}{10} - \frac{3}{10} = \underline{\hspace{2cm}}$$

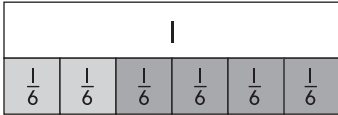
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Add and Subtract Fractions

You can find and record the sums and the differences of fractions.

Add. $\frac{2}{6} + \frac{4}{6}$

Step 1 Model it.



Step 2 Think: How many sixths are there in all?

There are 6 sixths.

6 sixths = $\frac{6}{6}$

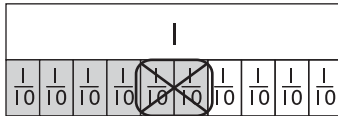
Step 3 Record it.

Write the sum as an addition equation.

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

Subtract. $\frac{6}{10} - \frac{2}{10}$

Step 1 Model it.



Step 2 Think: There are 6 tenths. I take away 2 tenths. How many tenths are left?

There are 4 tenths left.

4 tenths = $\frac{4}{10}$

Step 3 Record it.

Write the difference as a subtraction equation.

$\frac{6}{10} - \frac{2}{10} = \frac{4}{10}$

Find the sum or difference.

1. 7 eighth-size parts – 4 eighth-size parts = _____

$\frac{7}{8} - \frac{4}{8} =$ _____

2. $\frac{11}{12} - \frac{4}{12} =$ _____

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

4. $\frac{6}{8} - \frac{4}{8} =$ _____

5. $\frac{2}{4} + \frac{2}{4} =$ _____

6. $\frac{4}{5} - \frac{3}{5} =$ _____

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