Introducing:

• first addend
• second addend
• sum

\[
\frac{1}{5} + \frac{3}{5} = \frac{4}{5}
\]

Simplify
This picture shows an addition example with two *addends* and a *sum*. The *first addend* $\frac{1}{5}$ is combined with the *second addend* $\frac{3}{5}$ to give the *sum* $\frac{4}{5}$. Notice how the *sum* $\frac{4}{5}$ combines the 1 red fifth with the 3 blue fifths.
\( \frac{1}{5} \) and \( \frac{3}{5} \) are like fractions because the denominators are the same. When the addend denominators are the same, add the numerators to get the numerator of the sum.
The sum $\frac{12}{8}$ is written as a mixed number in lowest terms. The numerals $\frac{12}{8}$ and $1 \frac{1}{2}$ are correct names for the sum of $\frac{5}{8}$ and $\frac{7}{8}$.
Here, mixed numbers are added. The whole number 1 in $1 \frac{3}{5}$ is added to the whole number 2 in $2 \frac{1}{5}$ for a whole number 3 in the sum. The fractions $\frac{3}{5}$ and $\frac{1}{5}$ are added for the $\frac{4}{5}$ in the sum.
The same example $1 \frac{3}{5} + 2 \frac{1}{5}$ is shown with number lines. Add the whole numbers and then the fractions:

$1 \frac{3}{5} + 2 \frac{1}{5} = (1+2) + \left( \frac{3+1}{5} \right) = 3 \frac{4}{5}$. 

Simplify
This example shows the sum $3 \frac{5}{5}$ written as 4. Since the fraction $\frac{5}{5}$ is equal to 1, $3 \frac{5}{5}$ is equal to $3 + 1$ for a sum of 4
This example shows the sum $3 \frac{7}{5}$ written as $4 \frac{2}{5}$. The $\frac{7}{5}$ part of the sum can be renamed as $1 \frac{2}{5}$. The 1 in $1 \frac{2}{5}$ is added to the whole number 3 for the 4 in $4 \frac{2}{5}$: $1 \frac{3}{5} + 2 \frac{4}{5} = 3 \frac{7}{5} = 3 + 1 \frac{2}{5} = 4 \frac{2}{5}$. 

\[\begin{align*}
1 \frac{3}{5} + 2 \frac{4}{5} &= (1+2) \frac{(3+4)}{5} = 3 \frac{7}{5} \\
&= 4 \frac{2}{5}
\end{align*}\]
The addends $\frac{2}{3}$ and $\frac{3}{5}$ are unlike fractions. Each addend is written with the common denominator 15, giving $\frac{10}{15}$ and $\frac{9}{15}$. Then add the numerators for a sum of $\frac{19}{15}$ or $1\frac{4}{15}$. 
The unlike fractions $2\frac{1}{4}$ and $1\frac{2}{3}$ are renamed as like fractions $2\frac{3}{12}$ and $1\frac{8}{12}$. Then the whole numbers and numerators are added for a sum of $3\frac{11}{12}$.
Write each *addend* with a common denominator 12. Because \( \frac{17}{12} \) can be written as \( 1 \frac{5}{12} \), we can write the sum \( 4 \frac{17}{12} \) as \( 5 \frac{5}{12} \).
What is the sum of $1 \frac{2}{3}$ and $2 \frac{1}{5}$
To find the sum from the picture, color the whole number parts of each addend onto the sum. So the first circle and the second and third circles will be colored in. Then color the fraction parts $\frac{2}{3}$ and $\frac{1}{5}$ onto the sum circles for a sum of $3 \frac{13}{15}$. The illustration shows how the sum is calculated.