

Adding Fractions with Common Denominators



- Starting with the whole pie, how would I use a fraction to describe each image shown above?

**When Adding Fractions that have Common Denominators...
Add Only the Numerators**

- How could I use the images shown above to verify why I only add the numerators?

Using fraction strips also helps illustrate fraction addition.

- How would I explain the addition that is occurring in the image below?

$$\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \frac{8}{7}$$

1											
$\frac{1}{2}$						$\frac{1}{2}$					
$\frac{1}{3}$				$\frac{1}{3}$				$\frac{1}{3}$			
$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$		
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$
$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$



- How could I use the fraction strips shown below to explain why I only add the numerators?



$$\frac{3}{7} + \frac{2}{7} = \frac{5}{7}$$

- How would I use fraction strips to illustrate adding these fractions?

$$\frac{4}{7} + \frac{5}{7}$$

- Can I think of another way to represent the fraction amount nine-sevenths?
- How would I show this using fraction strips?





A student has solved the addition problem shown below.

- How would I walk someone through this solution and explain the thinking that occurred?

Calculate the sum.
$\frac{3}{12} + \frac{5}{12} = \frac{3+5}{12} = \frac{8}{12}$

The student completes the solution by writing their answer in simplest form.

- How would I explain writing a fraction in simplest form?

- How do I determine if a fraction can be simplified, or, if it's already in simplest form?

Calculate the sum.
$\frac{3}{12} + \frac{5}{12} = \frac{3+5}{12} = \frac{8}{12}$
Write answer in <u>simplest form</u> .
$\frac{8}{12} = \frac{2}{3}$

Adding Fractions with Common Denominators

Which statements do I feel confident explaining and demonstrating?

Which statements do I not feel confident explaining and demonstrating?

- ✓ I can explain a fraction amount using the terms numerator, denominator, equal parts and whole amount
- ✓ I can draw a fraction strip to represent a fraction amount
- ✓ I can explain and demonstrate how I use fraction strips to determine the sum of two fractions
- ✓ I can use fraction strips to illustrate why I only add the numerators of fractions that have common denominators
- ✓ I can explain and demonstrate how I write a fraction in simplest form/lowest terms
- ✓ I can explain how I know when a fraction is in simplest form/lowest terms

$$\frac{2ab + 6k}{2ab + 6k}$$

