

Adding Fraction Multiples



Same Denominators



In this fraction addition, both the fractions have the **same denominator**.

$$\frac{3}{5} + \frac{1}{5} = \frac{4}{5}$$

To solve the calculation, the **denominator stays the same**, and the **numerators are added together**.

Same Denominators



In this fraction addition, both the fractions have the **same denominator**.

This is the same answer written as a mixed number.

$$\frac{5}{3} + \frac{6}{3} = \frac{11}{3} = 3\frac{2}{3}$$



This answer is an improper fraction. The denominator tells us the whole is made of three parts.

Same Denominators



In this fraction addition, both the fractions have the **same denominator**.

$$2\frac{3}{4} + \frac{3}{4} =$$

This is a mixed number. Change it to an improper fraction before calculating.



Same Denominators



In this fraction addition, both the fractions have the **same denominator**.

$$\frac{11}{4} + \frac{3}{4} = \frac{\quad}{4}$$

This is a mixed number. Change it to an improper fraction before calculating.

Same Denominators



In this fraction addition, both the fractions have the **same denominator**.

This answer is an improper fraction.
Change it to a mixed number.

$$\frac{11}{4} + \frac{3}{4} = \frac{14}{4}$$

This is a mixed number. Change it to an improper fraction before calculating.

Same Denominators



In this fraction addition, both the fractions have the **same denominator**.

This answer is an improper fraction. Change it to a mixed number.

This answer can be simplified.

$$\frac{11}{4} + \frac{3}{4} = \frac{14}{4} = 3\frac{2}{4}$$

This is a mixed number. Change it to an improper fraction before calculating.



Same Denominators



In this fraction addition, both the fractions have the **same denominator**.

This answer is an improper fraction. Change it to a mixed number.

This answer can be simplified.

$$\frac{11}{4} + \frac{3}{4} = \frac{14}{4} = 3\frac{1}{2}$$

This is a mixed number. Change it to an improper fraction before calculating.



You try...



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

$$1\frac{6}{7} + \frac{4}{7} =$$

You try...



$$\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$$

$$1\frac{6}{7} + \frac{4}{7} = \frac{17}{7} = 2\frac{3}{7}$$

Denominator Multiples



In this fraction addition, both the fractions have **different denominators** which are multiples of the same number.

The diagram illustrates the process of finding a common denominator for the fractions $\frac{2}{3}$ and $\frac{1}{6}$. It shows the fraction $\frac{2}{3}$ with a plus sign and $\frac{1}{6}$. To the left of $\frac{2}{3}$, there are two boxes: the top one contains $\times 2 = 4$ and the bottom one contains $\times 2 = 6$. An orange arrow starts from the top box and points to the numerator '2' of the fraction $\frac{2}{3}$. Another orange arrow starts from the bottom box and points to the denominator '3' of the same fraction.

$$\frac{2}{3} + \frac{1}{6}$$

To solve the calculation, we use **multiplication** to change the fraction with the lowest denominator into an **equivalent fraction** with the same denominator as the other fraction.

Remember to do the same multiplication to the numerator.

Denominator Multiples



Now we have a calculation where both the denominators are the same number.

$$\begin{array}{c} \times 2 = 4 \\ \hline 2 \\ 3 \end{array} + \begin{array}{c} 1 \\ \hline 6 \end{array} = \begin{array}{c} 4 \\ \hline 6 \end{array} + \begin{array}{c} 1 \\ \hline 6 \end{array} = \begin{array}{c} 5 \\ \hline 6$$

$\times 2 = 6$

To solve the calculation, the **denominator** stays the **same**, and the **numerators** are added together .

Denominator Multiples



Let's try this with another calculation where the fractions have different denominators which are multiples of the same number.

$$\times 3 = 9$$

$$\frac{3}{4}$$

+

$$\frac{7}{12}$$

=

$$\frac{9}{12}$$

+

$$\frac{7}{12}$$

=

$$\frac{16}{12}$$

=

$$1\frac{4}{12}$$

$$\times 3 = 12$$

$$1\frac{1}{3}$$

Denominator Multiples



Let's try this with another calculation where the fractions have different denominators which are multiples of the same number.

$\times 5 = 25$

$$\frac{5}{2} + \frac{3}{10} = \frac{25}{10} + \frac{3}{10} = \frac{28}{10} = 2\frac{4}{5}$$

$\times 5 = 10$

You try...



$$\frac{3}{4} + \frac{4}{8} =$$

$$\frac{2}{7} + \frac{1}{14} =$$

You try...



$$\frac{3}{4} + \frac{4}{8} = \frac{6}{8} + \frac{4}{8} = \frac{10}{8} = 1\frac{2}{8}$$

$$= 1\frac{1}{4}$$

$$\frac{2}{7} + \frac{1}{14} = \frac{4}{14} + \frac{1}{14} = \frac{5}{14}$$

Denominator Multiples



Let's try this with another calculation where both the fractions have different denominators.

$$\frac{2}{5} + \frac{1}{6} = \frac{12}{30} + \frac{5}{30} = \frac{17}{30}$$

The diagram illustrates the process of finding a common denominator for the fractions $\frac{2}{5}$ and $\frac{1}{6}$. It shows the multiplication of each fraction by a factor to reach a common denominator of 30.

For the first fraction, $\frac{2}{5}$, the denominator 5 is multiplied by 6 to get 30. This is shown by an upward arrow from the fraction to a box containing $\times 6 = 12$, and a downward arrow from the fraction to a box containing $\times 6 = 30$.

For the second fraction, $\frac{1}{6}$, the denominator 6 is multiplied by 5 to get 30. This is shown by an upward arrow from the fraction to a box containing $\times 5 = 5$, and a downward arrow from the fraction to a box containing $\times 5 = 30$.

Denominator Multiples



Let's try this with another calculation where both the fractions have different denominators.

The background of the slide is a colorful illustration of a beach. In the foreground, there's a sandy beach with a blue worm and two seashells. In the background, there's a blue ocean with white waves and a green shoreline with trees under a blue sky with white clouds.
$$\begin{array}{c} \times 5 = 15 \\ \uparrow \\ \frac{3}{4} + \frac{4}{5} = \frac{15}{20} + \frac{16}{20} = \frac{31}{20} = 1\frac{11}{20} \\ \downarrow \quad \downarrow \\ \times 5 = 20 \quad \times 4 = 20 \end{array}$$

You try...



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

$$\frac{3}{6} + \frac{4}{5} =$$

You try...



$$\frac{1}{4} + \frac{2}{3} = \frac{3}{12} + \frac{8}{12} = \frac{11}{12}$$

$$\frac{3}{6} + \frac{4}{5} = \frac{15}{30} + \frac{24}{30} = \frac{39}{30} = 1\frac{9}{30}$$
$$= 1\frac{3}{10}$$

$$\div 3 = 3$$



$$\div 3 = 10$$

