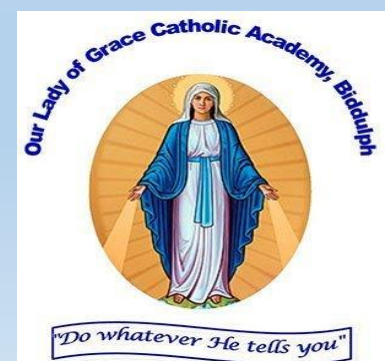




LBQ Support Pack

Welcome to your maths help pack for the week. In this pack you will find a page or two that will help you with the days task on LBQ.



29.06.20

Add and Subtract Fractions with Related Denominators (Proper, Improper and Mixed Numbers)

Today you are going to be adding and subtracting fractions with related denominators.

Related denominators happen when one **denominator** is a multiple of the other; for example, the fractions $1/3$ and $3/9$ have **related denominators** because 9 is a multiple of 3.

Let's have a go at the question below together.

For this calculation the question is asking you to work out $1/12 + 5/6$. These fractions have related denominators and therefore we can convert one to be the same as the other.

We know that for this to happen, the denominator for $5/6$ has been changed to $?/12$. Therefore we know that the number 6 has been doubled, therefore the missing number must be double 5, which is 10. The calculation then becomes $1/12 + 10/12$ which we can work out easily as $11/12$.

$\frac{1}{12} + \frac{5}{6} = \frac{?}{?}$

29.06.20

Add and Subtract Fractions with Related Denominators (Proper, Improper and Mixed Numbers)

Lets Practice!

Have a go at the question below to get yourself ready.

$$\frac{1}{3} - \frac{1}{9} = \frac{?}{?}$$

The image shows a fraction subtraction problem on a blue background. The equation is $\frac{1}{3} - \frac{1}{9} = \frac{?}{?}$. Below each fraction are empty boxes for the numerator and denominator. The first fraction, $\frac{1}{3}$, is enclosed in a white box. The second fraction, $\frac{1}{9}$, is also enclosed in a white box. The result is a fraction with question marks in the numerator and denominator, also enclosed in a white box. The entire problem is set against a blue background with a lighter blue border.

30.06.20

Add Fractions with Related Denominators

Today you are going to focus purely on adding fractions with related denominators so you don't have to worry about subtracting them!

For the calculation $\frac{2}{3} + \frac{1}{6}$ we will need to convert $\frac{2}{3}$ into sixths as $\frac{1}{6}$ cannot be simplified or converted into thirds.

If we multiply both the numerator and the denominator of $\frac{2}{3}$ by 2, we end up with $\frac{4}{6}$. This can now be added to $\frac{1}{6}$ easily.

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

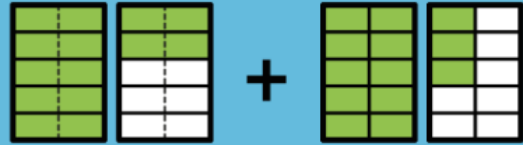
The diagram illustrates the addition of $\frac{2}{3}$ and $\frac{1}{6}$. At the top, two hexagonal fraction models are shown. The first hexagon is divided into 3 equal triangles, with 2 triangles shaded green, representing $\frac{2}{3}$. The second hexagon is divided into 6 equal triangles, with 1 triangle shaded green, representing $\frac{1}{6}$. Below these, a blue rectangular box contains a fraction bar with three sections. The first section contains $\frac{2}{3}$ and the second section contains $\frac{1}{6}$, with a plus sign between them. To the right of the box is an equals sign followed by a fraction bar with two sections, each containing a question mark, representing the unknown sum.

30.06.20

Add Fractions with Related Denominators

Lets practice!

Have a go at the example to help!


$$\frac{7}{5} + \frac{13}{10}$$
$$\frac{\boxed{}}{\boxed{}} + \frac{13}{10} = \frac{\boxed{?}}{\boxed{?}}$$

31.06.20

Add Improper Fractions with Related Denominators

Today you are going to be exploring adding improper fractions with related denominators.

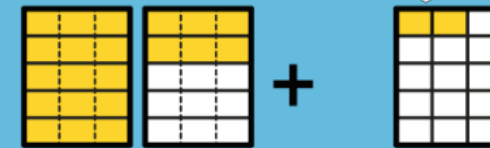
An **improper fraction** is one where the numerator is larger than the denominator, for example, $5/4$ would be an **improper fraction**. The result is that **improper fractions** are always greater than 1.

Look at the problem below to help you.

$$7/5 + 2/15$$

For this calculation, we need to multiply the numerator denominator of $7/5$ by three so we can calculate in fifteenths. We will then have $21/15 + 2/15$.

We can then calculate the answer easily as $23/15$. The numerator is greater than the denominator so the fraction is improper.



$$\frac{7}{5} + \frac{2}{15} = \frac{?}{?}$$

Add Mixed Number Fractions With Related Denominators

Today you are going to be adding mixed numbers to fractions with related denominators.

Mixed numbers are the ending result of a solved improper fraction. An improper fraction is when the numerator is higher than the denominator.

For example: $12/8$. This fraction is an improper fraction because 12 is higher than 8, meaning that the value of this fraction is more than just one whole.

Have a go at the example below to help.

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

$\frac{3}{4}$ add $\frac{3}{4}$ is equal to $1 \frac{2}{4}$. If we add the other whole 1 we have $2 \frac{2}{4}$. We can simplify $2/4$ as this is equivalent to $\frac{1}{2}$. Therefore $2 \frac{1}{2}$.



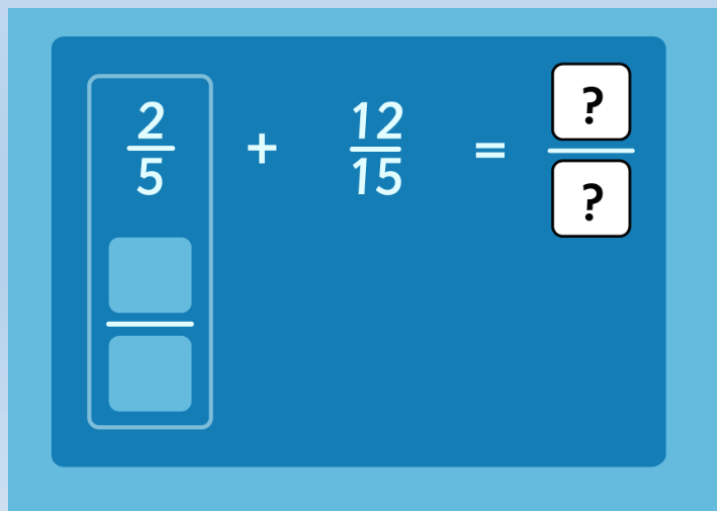
$$1 + \frac{3}{4} + \frac{3}{4} = \boxed{?} \frac{\boxed{?}}{\boxed{?}}$$

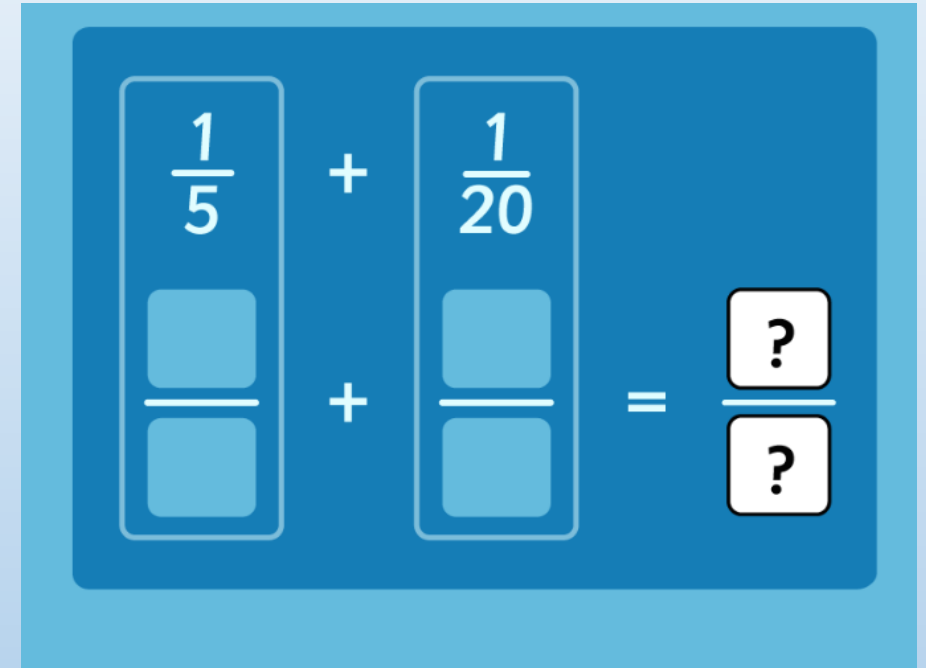
2.07.20

Add Proper Fractions With Related Denominators

Today you are exploring adding proper fractions with related denominators. After all the skills you have practiced this week, this should be easy peasy!

Have a go at the examples to help you out!


$$\frac{2}{5} + \frac{12}{15} = \frac{?}{?}$$


$$\frac{1}{5} + \frac{1}{20} = \frac{?}{?}$$