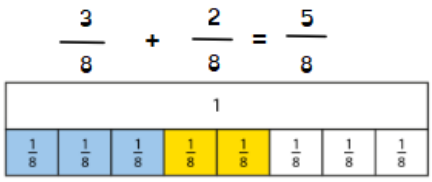
Adding and Subtracting Fractions

Fractions are equal parts of a whole.

We add and subtract fractions in a similar way to how we add and subtract whole numbers.

When adding and subtracting fractions within 1, with **the same denominator** we add or subtract the numerator.



Key Vocabulary

Mixed fractions – fraction that shows a whole number and fraction eg: $2\frac{1}{2}$

Improper fraction – when the numerator is greater than the denominator eg: $\frac{5}{4}$

Equivalent fraction – Two fraction that are worth the same (equal) eg: 1/2 and 2/4

numerator

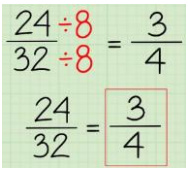
denominator

Simplifying fractions

How do you simplify fractions step by step?

Here are the steps to follow:

1. Write down the factors for the numerator and the denominator.
2. Determine the largest factor that is common between the two.
3. Divide the numerator and denominator by the greatest common factor.
4. Write down the reduced fraction.



https://www.bbc.co.uk/bitesize/topics/zhdwxnb/articles/zcdgxfr

Simplifying fractions – BBC Bitesize

Adding and subtracting fractions with different denominators.

When children are confident adding and subtracting within 1 we can challenge the children further by asking them to add and subtract fractions with unlike denominators. The children will use their times tables to find a common multiple of each denominator.

Stepping it up: Adding Fractions with unlike denominators.

1. Look at the fractions.
   It may help to write the fractions as equivalent fractions.
2. Find the smallest common denominator.
3. Add numerators.
4. Keep the denominator the same.

$\left(\frac{3}{4} + \frac{1}{6} = \right) \quad \frac{9}{12} + \frac{2}{12} = \frac{11}{12}$

$\frac{3}{4} + \frac{1}{6} =$

4, 8, 12, 16 (4x3=12)

6, 12 (6x2=12)

$\frac{3}{4} = \frac{9}{12}$ (3x3, 4x3)

$\frac{1}{6} = \frac{2}{12}$ (1x2, 6x2)

Subtracting follows the same rules. When the common denominator has been found subtract the numerators. Refer to above BBC Bitesize clip.

STEM Sentences:

Use these sentences in your Unexpected Adventure Trail book to help you explain adding or subtracting fractions.

$\frac{\square}{\square}$ is __ lots of $\frac{\square}{\square}$

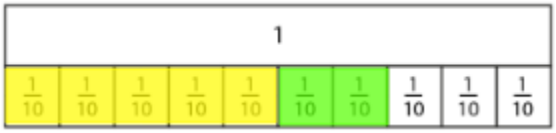
$\frac{\square}{\square}$ is __ lots of $\frac{\square}{\square}$

I know that __ + __ = __

so, I know that $\frac{\square}{\square} + \frac{\square}{\square} = \frac{\square}{\square}$

$\frac{5}{10}$ is five lots of $\frac{1}{10}$

$\frac{2}{10}$ is two lots of $\frac{1}{10}$



I know that 5 + 2 = 7

so, I know that $\frac{5}{10} + \frac{2}{10} = \frac{7}{10}$

Compare fractions:

I know that ½ is › greater than ¼ because the smaller the denominator the bigger each of the parts.

¾ › ½ I know this because it is more than half. Half of 4 is 2 and the numerator is greater than 2.

½ is = equal to 2/4.

Challenge: Can you write your own instructions for adding and subtracting fractions with unlike denominators?

Learn to say and spell this maths vocabulary:

1 whole, numerator, denominator, fraction, improper, equal parts