12.2.21 Fractions

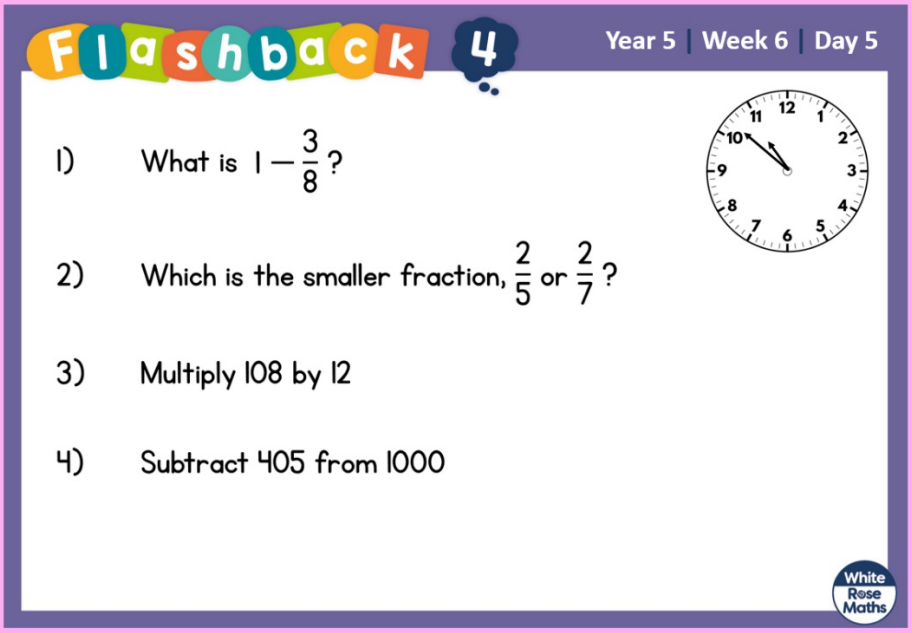
Learning Objective:
We are learning to add mixed numbers.

I will be successful if:

- I can add fractions where 1 or both are mixed numbers.
- I can use pictoral representations to help me add the wholes then add the parts.
- I can give my answer in the simplest form.

Key Vocabulary

- fractions as part of a whole
- equal
- representations
- shapes
- quantities
- numerator
- denominator
- common denominator
- non-unit and unit fractions
- equivalent fractions
- improper fractions
- mixed numbers
- simplest form



Challenge - Complete the statement.

5) A square has .... pairs of parallel lines

6) An equilateral triangle has ....parallel lines

7) A haxagon has ....pairs of parallel lines

8) A rhombus has ....pairs of parallel lines

Flashback 4

Year 5 | Week 6 | Day 5

1) What is $1 - \frac{3}{8}$? $\frac{5}{8}$

2) Which is the smaller fraction, $\frac{2}{5}$ or $\frac{2}{7}$? $\frac{2}{7}$

3) Multiply 108 by 12 1,296

4) Subtract 405 from 1000 595

White Rose Maths

Challenge - Complete the statement.

5) A square has two pairs of parallel lines

6) An equilateral triangle has zero parallel lines

7) A haxagon has three pairs of parallel lines

8) A rhombus has two pairs of parallel lines

Adding 2 mixed numbers

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

Add the fractions by adding the whole first and then the fractions.

$1 + 2 = 3$

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

You've got to find the equivalent fractions first so that they have the same denominator.

Let's have a go at these.

First add the whole numbers

Then, add the fractions but don't forget to change the denominator first

$3\frac{1}{4} + 2\frac{3}{8}$

$4\frac{1}{9} + 3\frac{2}{3}$

What is happening in this example?

$$1\frac{3}{4}+2\frac{1}{8}=\frac{7}{4}+\frac{17}{8}=\frac{14}{8}+\frac{17}{8}=\frac{31}{8}=3\frac{7}{8}$$

How would you add this pair of fractions?

$$\frac{17}{6} + 1\frac{1}{3}$$

$$\frac{17}{6} + 1\frac{1}{3}$$

Option 1 : Convert to a mixed fraction

$$\frac{17}{6} = 2\frac{5}{6}$$

Then $2\frac{5}{6} + 1\frac{1}{3} \longrightarrow 2\frac{5}{6} + 1\frac{2}{6} = 4\frac{1}{6}$

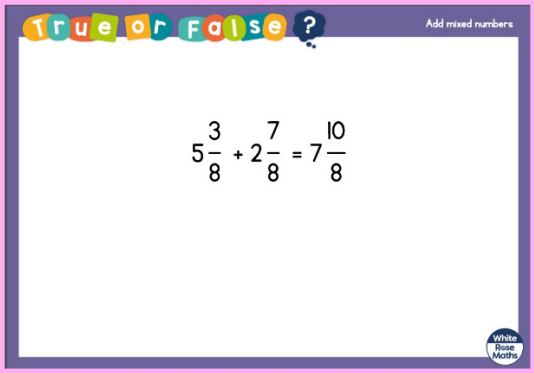
Option 2 : Convert to an improper fraction

$$1\frac{1}{3} = \frac{4}{3} \longrightarrow \frac{17}{6} + \frac{8}{6} = \frac{25}{6} \text{ or } 4\frac{1}{6}$$

12.2.21

Have a go at the questions on the sheet attached.

Reasoning challenges



Fill in the missing numbers.

$$4\ \frac{5}{6} + \square\frac{\square}{\square} = 10\ \frac{1}{3}$$

Jack and Whitney have some juice.

Jack drinks $2\frac{1}{4}$ litres and Whitney drinks $2\frac{5}{12}$ litres.

How much do they drink altogether?

Complete this using two different methods.

Which method do you think is more efficient? Why?