24.2.21 Fractions

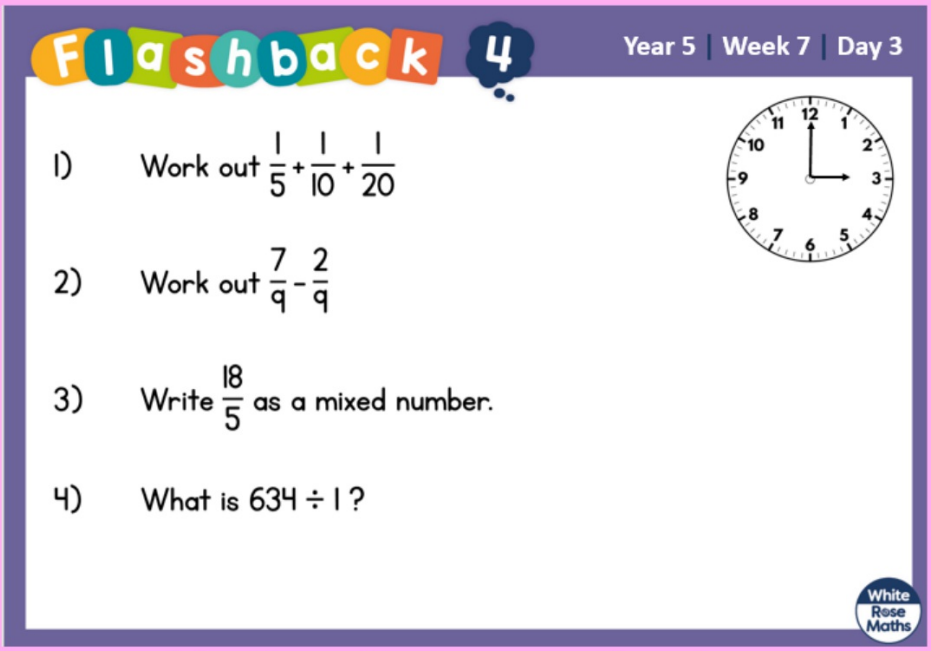
Learning Objective:
We are learning subtract mixed numbers.

I will be successful if:

- I can draw visual representations to help me.
- I can create a new mixed number by partitioning wholes into parts.
- I can find equivalents to help subtract proper fractions from mixed numbers.

Key Vocabulary

fractions as part of a whole
equal parts
equivalents
representations
numerator
denominator
non-unit and unit fractions
improper fractions
mixed number
multiples
addition
subtraction
difference
partitioning



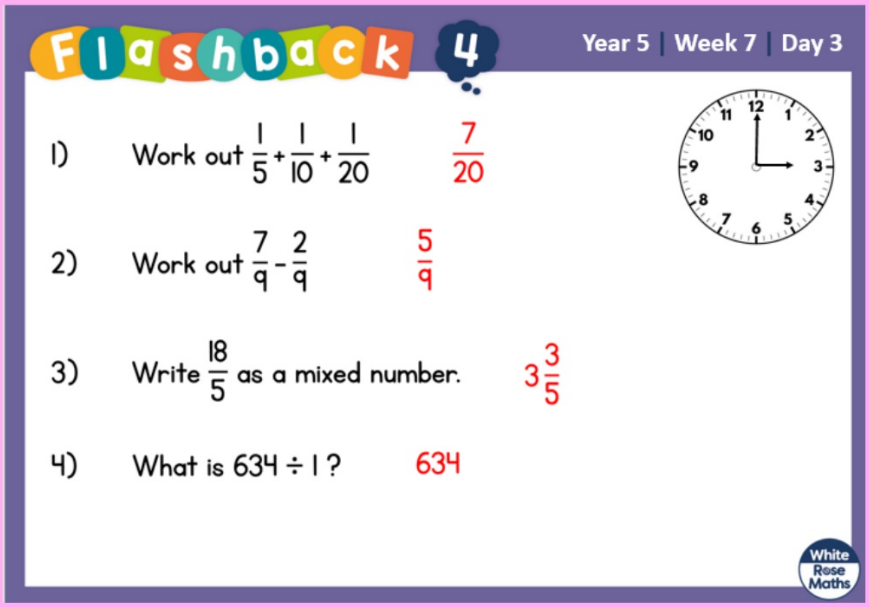
Challenge - simplify these fractions to their lowest form

5) $\frac{150}{200}$

7) $\frac{13}{169}$

6) $\frac{15}{40}$

8) $\frac{10}{18}$



Challenge - simplify these fractions to their lowest form

5) $\frac{3}{4}$

6) $\frac{3}{8}$

7) $\frac{1}{13}$

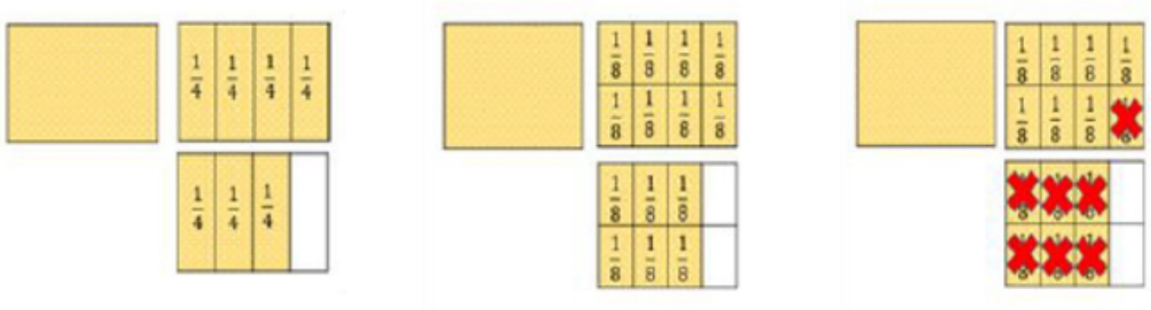
8) $\frac{5}{9}$

Today, we are going to continue with subtracting mixed numbers.

Which method did you prefer yesterday? Why?

Let's recap the bar model method from yesterday.

We can work out $2\frac{3}{4} - \frac{7}{8}$ using this method.



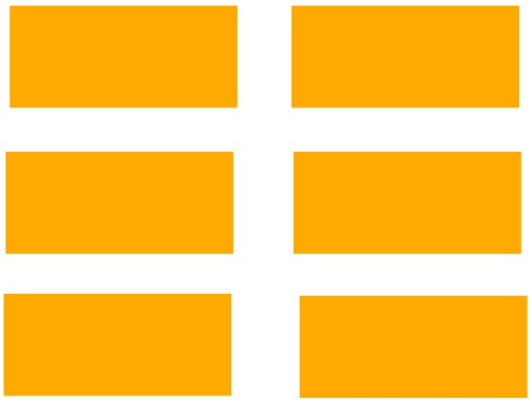
Can you explain each step of the method to a friend?

What is the answer?

Use this method to calculate:

$3\frac{1}{3} - \frac{5}{6}$

$5\frac{2}{3} - \frac{4}{9}$



You can also partition the fraction in different ways and find equivalent fractions to help you complete the subtraction calculation.

$$7\frac{1}{3}-\frac{5}{6}=6+1\frac{1}{3}-\frac{5}{6}=6+1\frac{2}{6}-\frac{5}{6}=6\frac{3}{6}=6\frac{1}{2}$$

Use this method to calculate:

$4\frac{2}{3}-\frac{5}{6}$

Use either the bar model method or partitioning method to solve this problem.

Mr Brown has $3\frac{1}{4}$ bags of flour. He uses $\frac{7}{8}$ of a bag.
How much flour does he have left?

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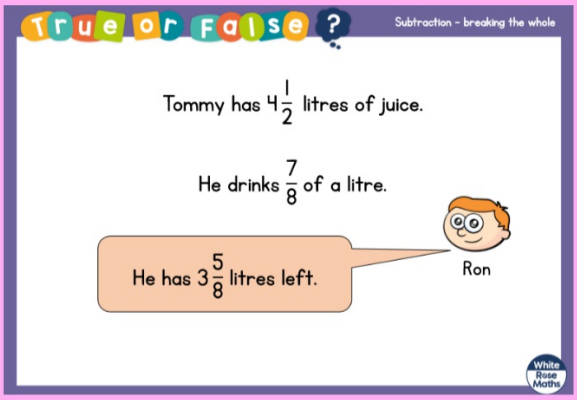
Have a go at the questions on the sheet attached.

Reasoning challenges



The difference between a fraction and a mixed number is $\frac{3}{4}$

The fraction has a denominator of 12

What could the fraction and mixed number be?

$$\square\frac{\square}{\square} - \frac{3}{4} = \frac{\square}{12}$$

$$\square\frac{\square}{12} - \frac{9}{12} = \frac{\square}{12}$$

Place 2, 3 and 4 in the boxes to make the calculation correct.

$$27\frac{1}{\square} - \frac{\square}{6} = 26\frac{\square}{3}$$

3 children are working out $6\frac{2}{3} - \frac{5}{6}$

They partition the mixed number in the following ways to help them.

Dora $5 + 1\frac{2}{3} - \frac{5}{6}$

Alex $5 + 1\frac{4}{6} - \frac{5}{6}$

Jack $5 + \frac{10}{6} - \frac{5}{6}$

Are they all correct?
Which method do you prefer?
Explain why.