22.2.21 Fractions

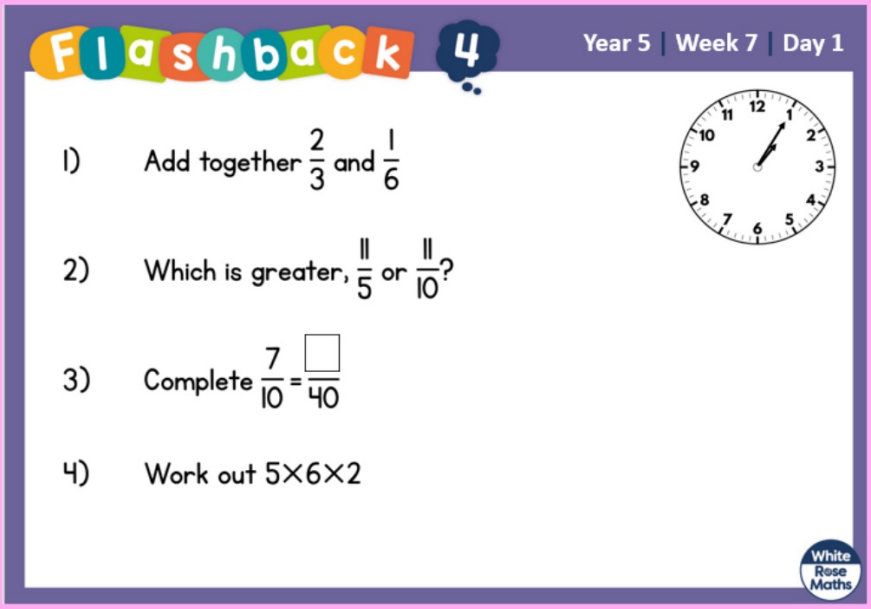
Learning Objective:
We are learning to subtract fractions.

I will be successful if:

- I can find equivalent fractions using my knowledge of multiples.
- I can subtract fractions with different denominators.
- I can use both the take away bar model method and the bar model to find the difference.

Key Vocabulary

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



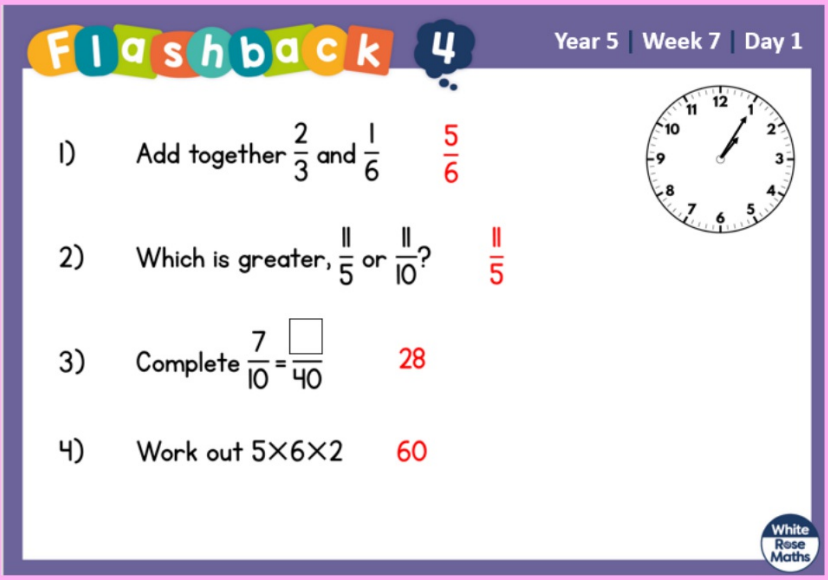
Challenge - simplify these fractions to their lowest form

5) $\frac{12}{18}$

6) $\frac{16}{36}$

7) $\frac{35}{45}$

8) $\frac{18}{56}$



Challenge - simplify these fractions to their lowest form

5) $\frac{2}{3}$

7) $\frac{7}{9}$

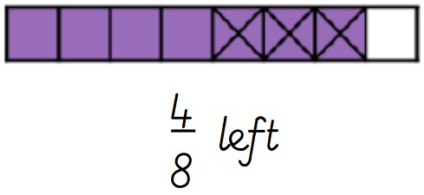
6) $\frac{4}{9}$

8) $\frac{9}{28}$

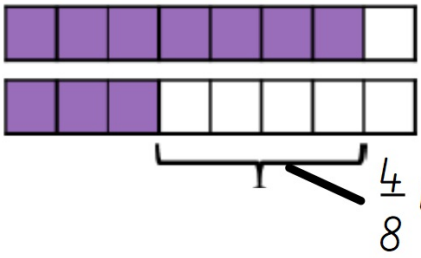
Last half term we looked at how to add fractions together.
This week, we are going to focus on how to subtract fractions.

Let's recap how we subtract fractions with the same denominator.

Here are two bar models to calculate $\frac{7}{8} - \frac{3}{8}$



$\frac{4}{8}$ left

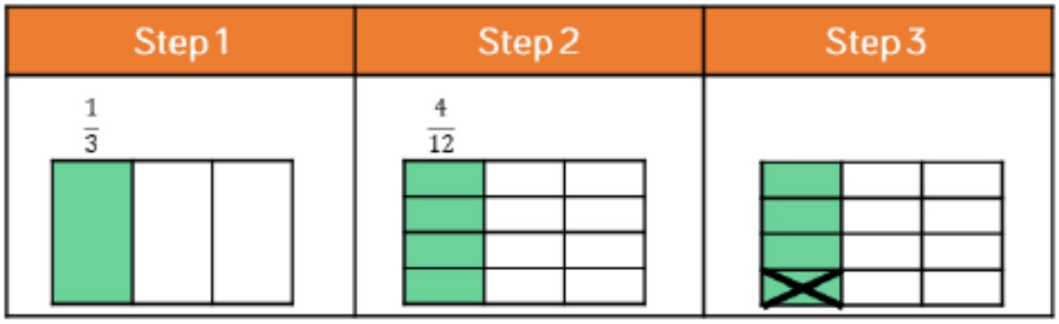


$\frac{4}{8}$ left

What is the difference between the two methods?
Which do you prefer? Why?

Subtracting fractions with different denominators.

$\frac{1}{3} - \frac{1}{12} =$



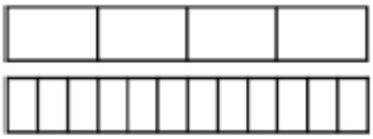
First you need to convert to find an equivalent fraction.

$\frac{1}{3} = \frac{4}{12}$

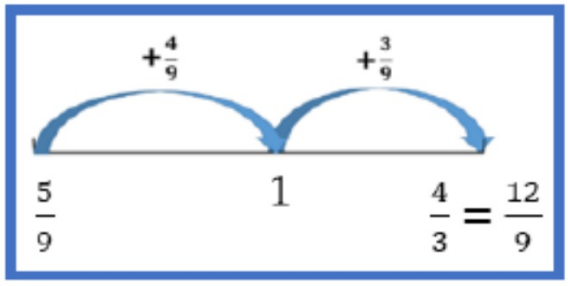
$\frac{4}{12} - \frac{1}{12} =$

Now use this method to solve $\frac{7}{8} - \frac{5}{16}$

Tommy and Teddy both have the same sized chocolate bar. Tommy has $\frac{3}{4}$ left, Teddy has $\frac{5}{12}$ left.
How much more does Tommy have?



Amir uses a number line to find the difference between $\frac{5}{9}$ and $\frac{4}{3}$



Use this method to find the difference between:

$\frac{3}{4}$ and $\frac{5}{12}$ $\frac{19}{15}$ and $\frac{3}{5}$ $\frac{20}{9}$ and $\frac{4}{3}$

Match the equivalent fraction calculations

$\frac{5}{6} - \frac{12}{18}$

$\frac{9}{10} - \frac{2}{10}$

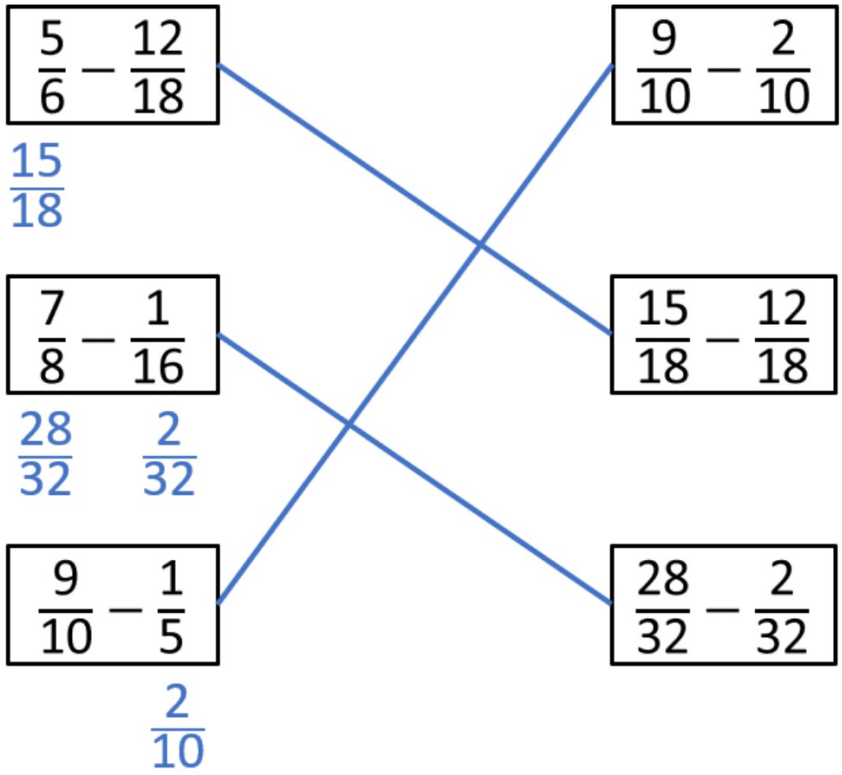
$\frac{7}{8} - \frac{1}{16}$

$\frac{15}{18} - \frac{12}{18}$

$\frac{9}{10} - \frac{1}{5}$

$\frac{28}{32} - \frac{2}{32}$

Answers


$\frac{5}{6} - \frac{12}{18}$
$\frac{15}{18}$
$\frac{7}{8} - \frac{1}{16}$
$\frac{28}{32}$ $\frac{2}{32}$
$\frac{9}{10} - \frac{1}{5}$
$\frac{2}{10}$
$\frac{9}{10} - \frac{2}{10}$
$\frac{15}{18} - \frac{12}{18}$
$\frac{28}{32} - \frac{2}{32}$

On Monday Whitney reads for $\frac{4}{7}$ of an hour.

On Tuesday she reads for $\frac{3}{14}$ of an hour less than on Monday.

For how long does Whitney read on Monday and Tuesday altogether?

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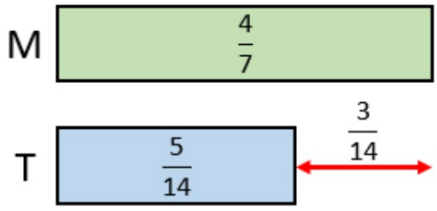
Answers



$$\frac{4}{7} - \frac{3}{14} =$$

$$\frac{8}{14} - \frac{3}{14} = \frac{5}{14}$$

For how long does Whitney read on Monday and Tuesday altogether? $\frac{4}{7} + \frac{5}{14} =$

$$\frac{8}{14} + \frac{5}{14} = \frac{13}{14}$$ of an hour

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Have a go at the questions on the sheet attached.

Reasoning challenges

Which subtraction is the odd one out?

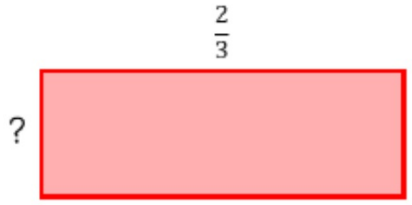
A $\frac{13}{4} - \frac{3}{8}$

B $\frac{10}{3} - \frac{2}{9}$

C $\frac{23}{7} - \frac{1}{3}$

Explain why.

The perimeter of the rectangle is $\frac{16}{9}$



Work out the missing length.