

Understand the numerators of non-unit fractions

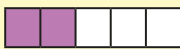
Notes and guidance

In this small step, children explore and understand the role of the numerator in unit and non-unit fractions.

Children need to be secure in their understanding of unit fractions before moving on to non-unit fractions. Children understand that a non-unit fraction is made up of a quantity of unit fractions, for example $\frac{3}{4}$ is the same as three single quarters or $\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

A range of representations, including shaded shapes, number lines and bar models, can be used to help children identify fractions. Concrete and pictorial resources are useful for demonstrating the role of the numerator as well as reinforcing the role of the denominator.

Things to look out for

- Children may not recognise that non-unit fractions are made up of quantities of unit fractions.
- When using diagrams, children may count the shaded parts as the numerator and the unshaded parts as the denominator, for example $\frac{2}{3}$ rather than $\frac{2}{5}$ 

Key questions

- How many equal parts is the whole split into?
- How many equal parts are shaded/circled?
- How do you know what the denominator/numerator is?
- Where can you see the denominator in the diagram? Where can you see the numerator?
- Can you draw a diagram/bar model to represent the fraction?
- What is the difference between a unit fraction and a non-unit fraction?

Possible sentence stems


- There are _____ equal parts.
So the denominator is _____
_____ of the equal parts are shaded.
So the numerator is _____
The fraction shaded is $\frac{\square}{\square}$

National Curriculum links

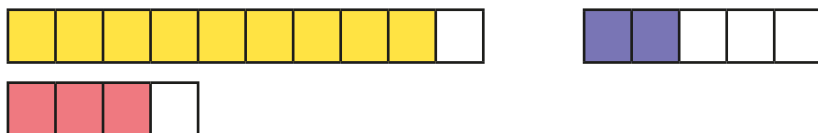
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators

Understand the numerators of non-unit fractions

Key learning

- 
 - How many equal parts has the bar model been split into?
 - How many equal parts of the bar model are shaded?
 - What is the numerator?
 - What is the denominator?
 - How do you know?
 - What fraction of the bar model is shaded?

- What fraction of each bar model is shaded?



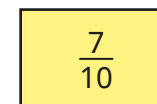
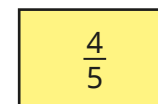
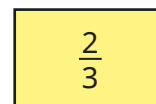
How do you know?

- The shape has been split into quarters.

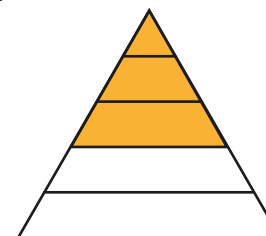
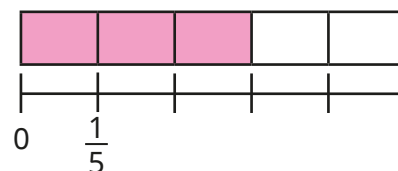
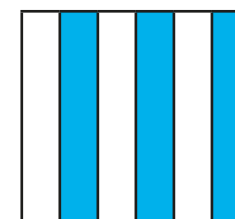
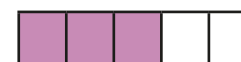


- What fraction of the shape is shaded?
- How many lots of one quarter are shaded?
- What do you notice?

- Draw bar models to show each fraction.



- Which diagrams show $\frac{3}{5}$?



- Draw another diagram that shows $\frac{3}{5}$
- Draw another diagram that does not show $\frac{3}{5}$

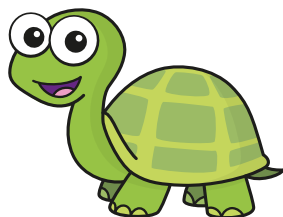
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Reasoning and problem solving

Tiny is working out the fraction shown in the bar model.



2 parts
are shaded and 3
are not, so the
fraction is $\frac{2}{3}$

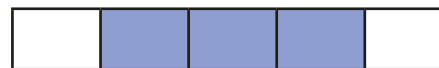


Do you agree with Tiny?
Why?



No

Amir and Dexter are looking at a bar model.



This is $\frac{3}{5}$

Amir

This is 3 lots of $\frac{1}{5}$



Dexter

Who is correct?
Explain your answer.

Both are correct.
 $\frac{3}{5}$ is the same as 3
one-fifths or
 $\frac{1}{5} + \frac{1}{5} + \frac{1}{5}$