Understand the whole

Notes and guidance

Children begin this block by understanding the whole. They covered this in Year 3, but may need to recap the part-whole relationship of fractions.

Children use diagrams to identify how many equal parts a shape has been split into and move on to thinking about how many more parts are needed to make the whole. They use the denominator to identify how many equal parts a whole has been divided into. For example, for the fraction $\frac{3}{7}$, the whole has been split into 7 equal parts because the denominator is 7. Children explain whether a fraction is a small (for example, $\frac{1}{10}$) or large (for example, $\frac{9}{10}$) part of the whole.

The learning from this step will be built upon when looking at fractions greater than 1 and also decimals later in the year.

Things to look out for

- Children may not be able to identify or explain whether a fraction is a large or small part of the whole.

- When trying to identify how many equal parts the whole has been divided into, some children may be reliant on diagrams rather than using the denominator.

Key questions

- Has the whole been divided into equal parts? How do you know?

- In this diagram, how many equal parts has the whole been divided into?

- How many equal parts has the whole been divided into for $\frac{1}{5}$?

- Is this a large or small part of the whole? How do you know?

- How many more parts are needed to make the whole? What fraction would this be?

Possible sentence stems

- The whole has been divided into _____ equal parts.

- _____ has been shaded.

  To make 1 whole, I need to shade _____ equal parts.

  This is _____

National Curriculum links

- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators (Y3)

Understand the whole

Key learning

- Which shapes have been split into equal parts?
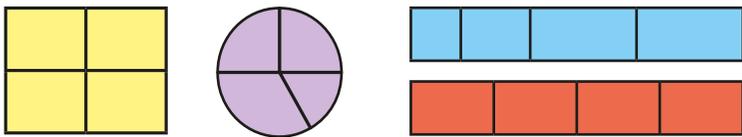
- Complete the sentences for each shape.
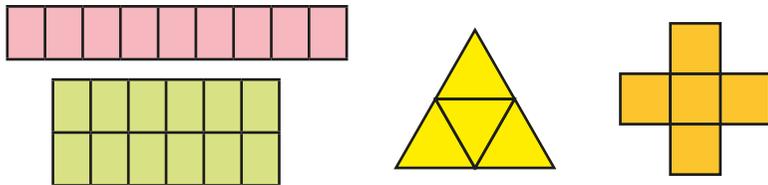

The whole is divided into _____ equal parts.

Each part is worth $\frac{1}{\square}$

- What fraction of each diagram is shaded in each colour?

  ▶ | Y | Y | B | B | B | B | G |

  ▶ | Y | Y | Y | B | G | G | G | G | G |
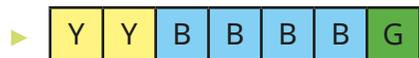
What fraction of each diagram represents the whole?

- Shade the shapes to make one whole.
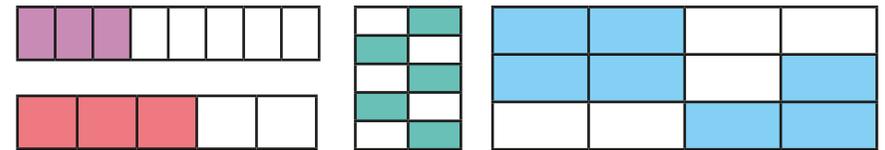
Complete the sentences for each diagram.

To make 1 whole, I shaded _____ equal parts.

The fraction I shaded was _____

- Complete the additions.

  ▶ $\frac{3}{4} + \frac{\square}{\square} = 1$ ▶ $\frac{3}{7} + \frac{\square}{\square} = 1$ ▶ $1 = \frac{\square}{\square} + \frac{3}{10}$

- Use the information in the table to draw each whole.

1 part	Number of parts in the whole
	5
	4
	3

Is there more than one answer?

Understand the whole

Reasoning and problem solving

Sort the fractions into the table.

$$\frac{3}{100} \quad \frac{3}{4} \quad \frac{3}{5}$$

$$\frac{3}{50} \quad \frac{17}{20} \quad \frac{7}{20}$$

Fractions that are a small part of the whole	Fractions that are a large part of the whole

Explain your choices.

What do you notice about the fractions?

small: $\frac{3}{100}$, $\frac{3}{50}$, $\frac{7}{20}$

large: $\frac{3}{4}$, $\frac{3}{5}$, $\frac{17}{20}$

If I split a shape into 4 parts, I have split it into quarters.

Is Tiny's statement always true, sometimes true or never true?

How do you know?

sometimes true

Filip splits a piece of ribbon into equal parts.

Here is part of his ribbon.
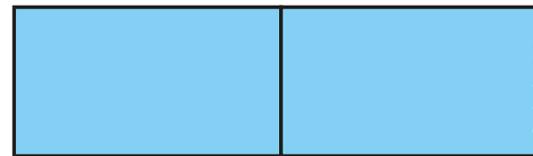
What fraction of the ribbon could the other part be?

multiple possible answers, with the denominator 2 greater than the numerator, e.g.

$\frac{2}{4}$, $\frac{5}{7}$, $\frac{98}{100}$