4 Fractions

Target

- **To recognise the decimal equivalents of simple fractions (tenths, half, fifths, quarters)**

Current understanding

Pupils should already be able to recognise a fraction ($\frac{1}{2}$) and a decimal (0.5).

Common errors

Pupils may think that, because $\frac{1}{10}$ is equivalent to 0.1, $\frac{1}{4}$ is equivalent to 0.4.

What to do

Vocabulary

numerator
denominator
equivalent
simplify
order

In the fraction $\frac{2}{5}$, 2 is the numerator and 5 is the denominator.

$\frac{1}{2}$, $\frac{5}{10}$ and 0.5 are equivalent.

What you need

Fraction wall (sheet 4.1)

Make sure the pupil understands the target.

Equivalent fractions

Use the fraction wall (**sheet 4.1**) to show the pupil that $\frac{1}{10}$ is equivalent to 0.1.

Discuss other equivalent fractions and decimals (tenths). For example, show that $\frac{3}{10}$ is equivalent to 0.3, 0.7 is equivalent to $\frac{7}{10}$ and $\frac{9}{10}$ is equivalent to 0.9.

Show that $\frac{1}{5}$ is equivalent to $\frac{2}{10}$ and to 0.2.

Ask the pupil what is equivalent to $\frac{2}{5}$ ($\frac{4}{10}$ and 0.4).

Ask similar questions to cover other fifths and one half.

- $\frac{1}{10}$, $\frac{3}{10}$, $\frac{7}{10}$ and $\frac{9}{10}$ are equivalent to 0.1, 0.3, 0.7, and 0.9.

- $\frac{2}{10}$ is equivalent to $\frac{1}{5}$ and 0.2.

- $\frac{4}{10}$ is equivalent to $\frac{2}{5}$ and 0.4.

- $\frac{5}{10}$ is equivalent to $\frac{1}{2}$ and 0.5.

- $\frac{6}{10}$ is equivalent to $\frac{3}{5}$ and 0.6.

- $\frac{8}{10}$ is equivalent to $\frac{4}{5}$ and 0.8.

- $\frac{10}{10}$ is equivalent to 1.

Ask the pupil:

- What is a half of a half?

- What is a half of 0.5?

Then use the fraction wall (sheet 4.1) to show that $\frac{1}{4}$ is equivalent to 0.25 and that 0.75 is equivalent to $\frac{3}{4}$.

It is useful for pupils to know the fraction and decimal equivalents listed above.

Ordering fractions

Use the fraction wall (sheet 4.1) to show that $\frac{1}{2}$ is smaller than $\frac{3}{5}$.

Help the pupil recognise which of a pair of fractions is the smaller or the larger. For example, $\frac{1}{2}$ and 0.4, $\frac{1}{4}$ and 0.4, 0.3 and $\frac{2}{5}$.

Finally, use the key questions to check that the pupil has reached the target and is confident.

Key questions

What is $\frac{1}{2}$ as a decimal?

Which decimal is equivalent to $\frac{7}{10}$?

What fraction is equivalent to 0.4? ($\frac{4}{10}$)
Can you simplify your answer? ($\frac{2}{5}$)

Which is larger, 0.8 or $\frac{3}{4}$? Explain your answer.

Fraction wall

$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{2}$					$\frac{1}{2}$				
$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$		$\frac{1}{4}$	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.25		0.25			0.25			0.25	