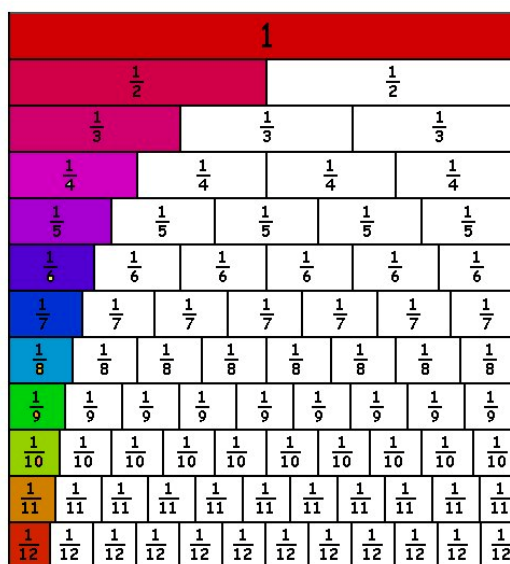


Key Vocabulary

Fraction	Any part of a group, number or whole.
Improper fraction	A fraction larger than one whole
Proper fraction	A fraction smaller than one whole
Vulgar fraction	Another name for a proper fraction
Top-heavy fraction	Numerator of fraction is larger than denominator
Percentage	Number out of 100
Decimal	Figures placed to the right of a decimal point, denoting a number not expressed as an integer.
Proportion	A part to whole comparison
Equivalent	Having the same value or amount
Lowest terms	the <b>form</b> of a fraction in which the numerator and denominator have no factor in common except 1 reduce a fraction to <b>lowest terms</b> .
Simplify	To reduce the numerator and denominator of a fraction to the smallest numbers possible

Key facts / Diagrams

Fraction	Decimal	Percent
$\frac{1}{2}$	0.5	50%
$\frac{1}{3}$	0.3333...	33.3333...%
$\frac{2}{3}$	0.6666...	66.6666...%
$\frac{1}{4}$	0.25	25%
$\frac{3}{4}$	0.75	75%
$\frac{1}{5}$	0.2	20%
$\frac{1}{10}$	0.1	10%



Common misconceptions

- A fraction can be visualised as divisions of a shape (especially a circle) but some pupils may not recognise that these divisions must be equal in size, or that they can be divisions of any shape.
- Pupils may not make the connection that a percentage is a different way of describing a proportion
- Some pupils may think that simplifying a fraction just requires searching for, and removing, a factor of 2 (repeatedly)

Worked examples

Turning a mixed number into a top heavy fraction

$$3 \frac{1}{10} = \frac{31}{10}$$

Multiply these numbers together = 30  
 Add on the number on top = 31 (this becomes the top number)  
 The number at the bottom stays the same.

$$\frac{1}{2} \xrightarrow{\times 2} \frac{2}{4} \xrightarrow{\times 2} \frac{4}{8} \xrightarrow{\times 2} \frac{8}{16} = \frac{16}{32} \dots$$