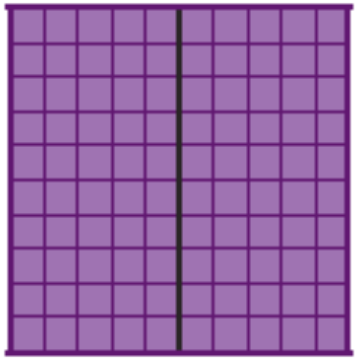
Templars Primary School Knowledge Organiser

Year 5 Fractions

Key Vocabulary

- numerator
- denominator
- unit fraction
- non-unit fraction
- whole
- equivalent
- mixed number
- improper fraction
- simplest form
- multiple
- common denominator
- common numerator

Equivalent fractions



$\frac{1}{2} = \frac{5}{10} = \frac{50}{100}$ (×5, ×10; ×5, ×10)

To find **equivalent fractions**, multiply or divide the numerator and denominator by the same number

Improper fractions

An **improper fraction** is a fraction where the numerator is greater than the denominator.

$\frac{5}{3}$

Mixed numbers

Mixed numbers contain a whole number and a fraction.

Convert an improper fraction to a mixed number

$\frac{9}{4}$

$9 \div 4 = 2r1$ → $2\frac{1}{4}$

Divide the numerator by the denominator.

This shows you the whole number and the fraction.

Convert an improper fraction to a mixed number

Multiply the whole by the denominator to make an improper fraction.

$2\frac{5}{6} = \frac{12}{6} + \frac{5}{6} = \frac{17}{6}$

Add the fractions together.

Sequences

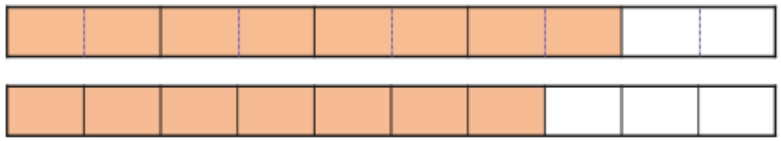
$\frac{1}{3}, \frac{2}{3}, 1, 1\frac{1}{3}, 1\frac{2}{3}, 2$

We can count in steps of any fraction from any number.

Counting in steps of ¾ :

Compare and order fractions less than 1

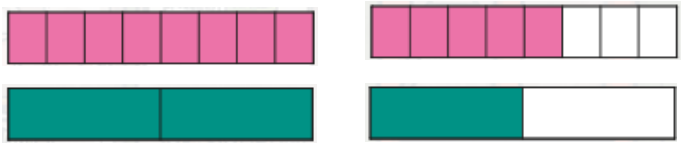
We can compare fractions whose denominators are multiples of the same number by finding the equivalent fraction.



$\frac{7}{10} < \frac{4}{5}$

Compare and order fractions greater than 1

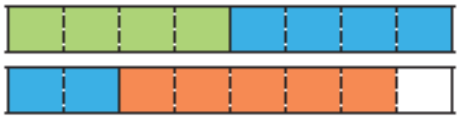
We can compare mixed fractions whose denominators are all multiples of the same number.



$1\frac{1}{2} < 1\frac{5}{8}$

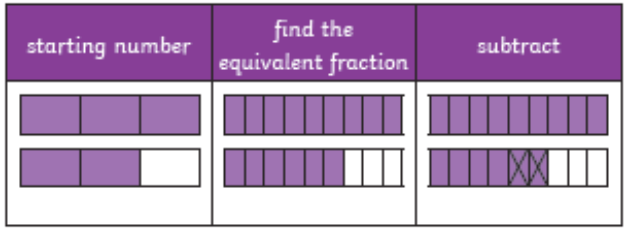
Add fractions

$\frac{1}{2} + \frac{3}{4} + \frac{5}{8} = \frac{4}{8} + \frac{6}{8} + \frac{5}{8} = \frac{15}{8} = 1\frac{7}{8}$



Subtract fractions

$1\frac{2}{3} - \frac{2}{9} = 1\frac{6}{9} - \frac{2}{9} = 1\frac{4}{9}$



Add mixed numbers

$1\frac{1}{4} + \frac{3}{8} = 1\frac{2}{8} + \frac{3}{8} = 1 + \frac{5}{8} = 1\frac{5}{8}$

$1\frac{1}{4} + \frac{3}{8} = \frac{5}{4} + \frac{3}{8} = \frac{10}{8} + \frac{3}{8} = \frac{13}{8} = 1\frac{5}{8}$

Subtract mixed numbers

$2\frac{3}{4} - 1\frac{5}{8} = 1\frac{1}{8}$

$2 - 1 = 1$

$\frac{3}{4} - \frac{5}{8} = \frac{1}{8}$

Multiply unit fractions by an integer

$\frac{1}{3} \times 5 = \frac{5}{3}$

Multiply non-unit fractions by an integer

$2 \times \frac{4}{9} = \frac{8}{9}$