Knowledge Organiser

Number

Year 5 | Fractions

This year, we will be learning how to use equivalent fractions to support adding and subtracting mixed numbers and to write fractions in their simplest form. Being fluent in your multiplication and division facts will really help you with this and the learning you will do in Year 6.

Builds from Year 4:
Find fractions of quantities.
Add and subtract fractions.
Understand hundredths $\frac{1}{100}$
Write tenths and hundredths as equivalent decimals.

This year:
Equivalent fractions.
Convert mixed numbers and improper fractions.
Add and subtract fractions.
Multiply fractions.

Leads to Year 6:
Use common factors to simplify fractions.
Use common multiples to express fractions in the same denomination.
Compare and order fractions.
Add and subtract fractions with different denominators and mixed numbers.
Multiply simple pairs of proper fractions
Divide fractions.

Converting Mixed Numbers & Improper Fractions

Mixed numbers contain a **whole number** and a **fraction**.

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

To convert an improper fraction to a mixed number, **divide** the **numerator** by the **denominator**.

$$\frac{7}{3}$$

$$7 \div 3 = 2r1$$

$$\frac{7}{3} = 2\frac{1}{3}$$

To convert a mixed number to an improper fraction to a mixed number, **multiply** the **whole** by the denominator to make an improper fraction.

$$4\frac{7}{8}$$

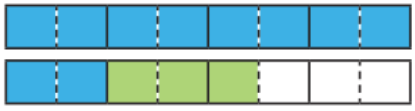
$$4 \times 8 = \frac{32}{8}$$

Then **add** the fractions together.

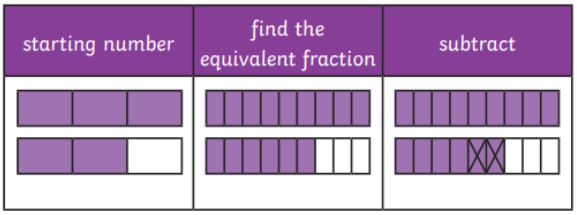
$$\frac{32}{8} + \frac{7}{8} = \frac{39}{8}$$

Adding & Subtracting Fractions

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

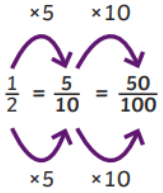


$$1\frac{2}{3} - \frac{2}{9} = 1\frac{6}{9} + \frac{2}{9} = 1\frac{4}{9}$$



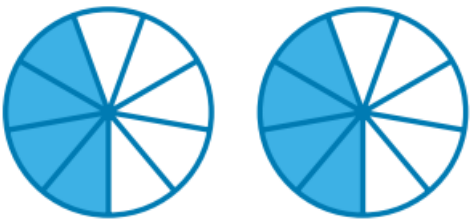
Equivalent Fractions

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



Multiplying Fractions

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



Key Vocabulary

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