

Year 6 Fraction Knowledge Organiser

National Curriculum Aims

- use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- compare and order fractions, including fractions > 1
- add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- multiply simple pairs of proper fractions, writing the answer in its simplest form
- divide proper fractions by whole numbers

Key Vocabulary

Fraction	A number that is part of a whole number which results from dividing one integer by a second integer
Numerator	The number above the line in a fraction
Denominator	The number below the line in a fraction
Equivalent	An equivalent fraction is a fraction with the same value as another
Simplest form	A fraction is in simplest form when the numerator and denominator cannot be any smaller
Improper Fraction	A fraction that has a numerator greater than the denominator
Mixed Number Fraction	A whole number together with a mixed fraction
Proper Fraction	Has a value less than 1. The numerator is smaller than the denominator.
Cancel	To cancel is to simplify it down to its lowest term by dividing the numerator and denominator by the same number

Home Learning



- Practice times tables with your child on the way to and from school (times tables are key when working with fractions).
- When in the shops looking at prices ask your child what a fraction of the amount is (e.g. $\frac{1}{2}$ of £5.00).

Core Knowledge and Representations

Adding Fractions (Same Denominator)

$$\frac{1}{4} + \frac{1}{4} = \frac{1+1}{4} = \frac{2}{4}$$

Subtracting Fractions (Same Denominator)

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

Multiplying Fractions

$$\frac{1}{2} \times \frac{2}{5} = \frac{1 \times 2}{2 \times 5} = \frac{\cancel{2}^1}{\cancel{2}^1 \times 5} = \frac{1}{5}$$

Core Knowledge and Representations

Adding Fractions (Mixed Denominator)

$$\frac{2}{3} + \frac{1}{6} = \frac{2}{6} + \frac{1}{6} = \frac{2+1}{6} = \frac{3}{6} = \frac{\cancel{3}^1}{\cancel{6}^2} = \frac{1}{2}$$

Subtracting Fractions (Same Denominator)

$$\frac{3}{2} - \frac{1}{6} = \frac{3}{6} - \frac{1}{6} = \frac{3-1}{6} = \frac{2}{6} = \frac{\cancel{2}^1}{\cancel{6}^3} = \frac{1}{3}$$

Dividing Fractions

$$\frac{1}{2} \div \frac{1}{6} = \frac{1}{2} \times \frac{6}{1} = \frac{1 \times 6}{2 \times 1} = \frac{6}{2} = 3$$

Converting Improper Fractions To Mixed Number Fractions

Example: Convert $\frac{11}{4}$ to a mixed fraction.

Divide:

$$\rightarrow 11 \div 4 = 2 \text{ with a remainder of } 3$$

Write down the 2 and then write down the remainder (3) above the denominator (4).

Answer:

$$2 \frac{3}{4}$$