

# Fractions - Knowledge Organiser

## Key Vocabulary

Fraction	Represents equal parts of a whole, by dividing into equal parts.
Numerator	The top number in a fraction. It tells you how many equal parts you have out of the total number of parts it is divided into.
Denominator	The bottom number in a fraction. It tells you how many equal parts a whole is divided into.
Unit fraction	A fraction where the numerator (top number) is one.
Non-unit fraction	A fraction where the numerator (top number) is anything except for one.
Equivalent fraction	Two fractions with the same value but have different numerators and denominators.

## Key Information

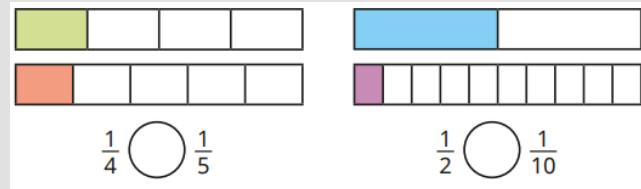
- When comparing and ordering unit fractions, the larger the denominator, the smaller the fraction.
- When comparing and ordering non-unit fractions, if the denominator is the same, then the greater the numerator, the greater the fraction.
- When drawing multiple number lines to find equivalent fractions, the start must be 0 and the end must be 1 and they must be in line with each other.
- We can compare and find equivalent fractions using bar models however, they must be the same length but divided into different parts to find equivalent fractions.

## Prior Knowledge

1	Year 2 - fractions	Children know about halves, quarters and thirds - now, children look at other denominators.
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## Worked Examples

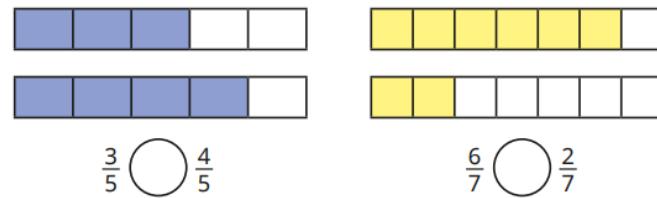
### Compare unit fractions:



When the numerators are the same, then the larger the denominator, the smaller the fraction.

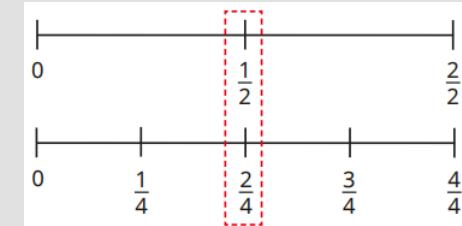
## Worked Examples

### Compare non-unit fractions:

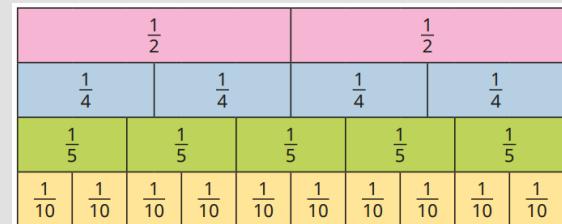


When the denominators are the same, then the greater the numerator, the greater the fraction.

### Equivalent fractions on a number line:



### Equivalent fractions as bar models:



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

$$\frac{1}{2} = \frac{5}{10}$$

$$\frac{1}{5} = \frac{2}{10}$$

$$\frac{2}{5} = \frac{4}{10}$$

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Unit fraction	A fraction where the numerator (top number) is one.
Non-unit fraction	A fraction where the numerator (top number) is anything except for one.
Fraction of an amount	You find an amount of a total number by sharing into equal groups and then counting how many in each group.

## Key Information

- When you add two fractions with the same denominator, the denominator remains the same.
- When you subtract one fraction from another with the same denominator, the denominator remains the same.
- When finding a fraction of an amount, you share into the number of groups that is the denominator and you count the number of groups that is the numerator.

## Prior Knowledge

- Year 2 - fractions Children know about halves, quarters and thirds - now, children look at other denominators.
- Year 2/3 - fractions The numerator is the number on the top and denominator is the number on the bottom.

## Worked Examples

### Adding fractions:

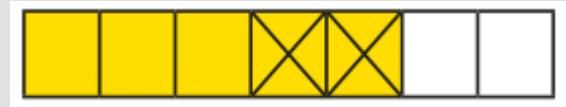
Use the number line to calculate  $\frac{2}{5} + \frac{1}{5}$



## Worked Examples

### Subtracting fractions:

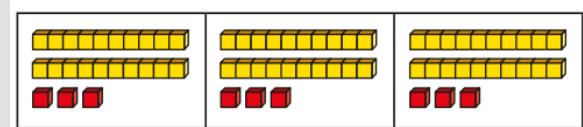
Use the model to help you complete the calculation.



$$\frac{5}{7} - \frac{2}{7} = \frac{3}{7}$$

### Unit fraction of a set of objects:

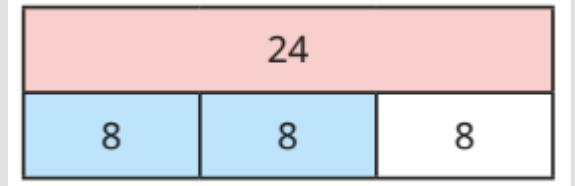
Use a bar model to find  $\frac{1}{3}$  of 69.



$$\frac{1}{3} \text{ of } 69 = 23$$

### Non-unit fraction of a set of objects:

Use a bar model to find  $\frac{2}{3}$  of 24.



$$\frac{2}{3} \text{ of } 24 = 16$$