

'I WILL SHINE'

# Fractions

## Prior learning

Let's activate my long-term memory!  
In Y5, I learnt to...

- compare and order fractions whose denominators are all multiples of the same number
- find equivalent fractions
- convert between mixed numbers and improper fractions
- add and subtract fractions with the same denominator and multiples of the same number
- multiply proper fractions by whole numbers

## Key vocabulary

What words will I use in this unit?

Have I heard any before?

common factors    common multiples  
simplify    simplest form    mixed numbers  
proper/improper fractions

## Tools and drawings

Which tools and drawing might I use to support my learning?

counters    Numicon    fraction wall

times table grids

fraction pieces/diagrams

bar models    part-whole diagrams

## Current learning

In this unit, I will learn how to...

- 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 [e.g.  $1/4 \times 1/2 = 1/8$ ]
- divide proper fractions by whole numbers [e.g.  $1/3 \div 2 = 1/6$ ].
- associate a fraction with division to calculate decimal fraction equivalents for a simple fraction

## Knowledge Pitstop

### Simplify Fractions

Factors of 9:

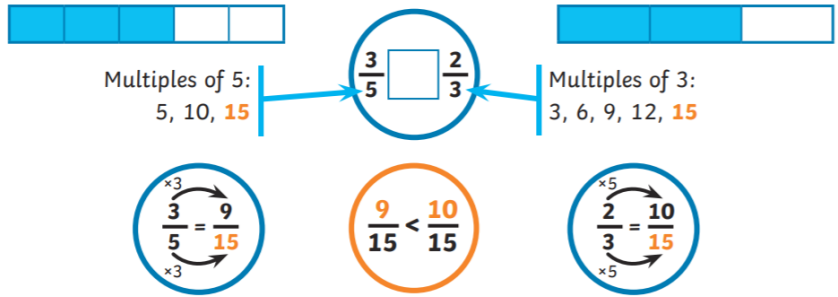
1, 3, 9

Factors of 12:

1, 2, 3, 4, 6, 12

### Compare and Order Fractions

#### Use the Common Denominator



### Adding and Subtracting Proper Fractions

#### Same Denominators

$$\frac{4}{7} + \frac{2}{7} = \frac{6}{7}$$

$$\frac{8}{11} - \frac{3}{11} = \frac{5}{11}$$

#### Different Denominators

$$\frac{2}{7} + \frac{3}{5}$$

$$\frac{9}{10} - \frac{1}{4}$$

Multiples of 7: 7, 14, 21, 28, 35  
Multiples of 5: 5, 10, 15, 20, 25, 30, 35

Multiples of 10: 10, 20  
Multiples of 4: 4, 8, 12, 16, 20

$$\frac{2}{7} = \frac{10}{35}, \frac{3}{5} = \frac{21}{35}$$

$$\frac{9}{10} = \frac{18}{20}, \frac{1}{4} = \frac{5}{20}$$

$$\frac{10}{35} + \frac{21}{35} = \frac{31}{35}$$

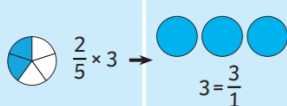
$$\frac{18}{20} - \frac{5}{20} = \frac{13}{20}$$

### Multiplying Proper Fractions

#### Multiplying Fractions by Fractions

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

#### Multiplying Fractions by Whole Numbers



$$\frac{2}{5} \times \frac{3}{1} = \frac{6}{5} = 1 \frac{1}{5}$$