

Maths- Fractions

This lesson will be live on teams for
your class at;

9am-5L

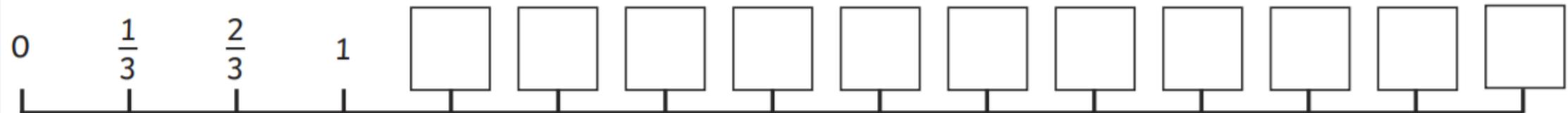
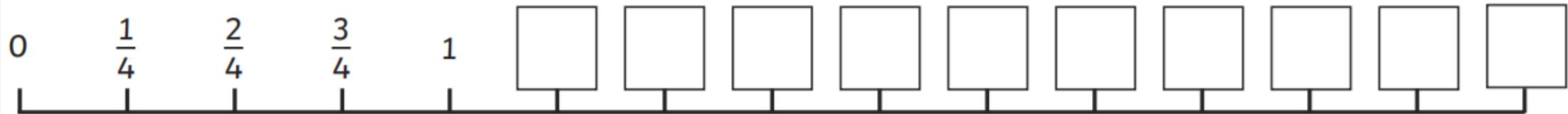
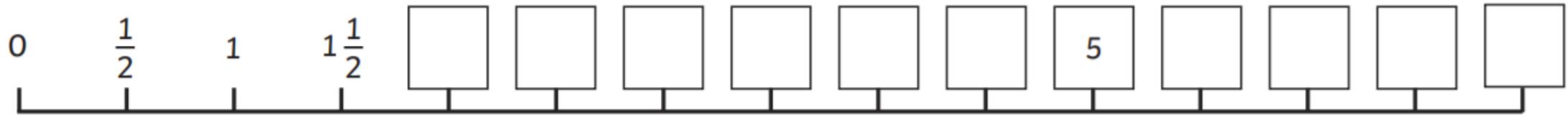
10am-5H

11am-5M

Learning objective; To identify improper and mixed
number fractions and convert between them.

Warm up- counting in fractions.

Copy and complete these fraction sequences in your book counting up in specific fractions.

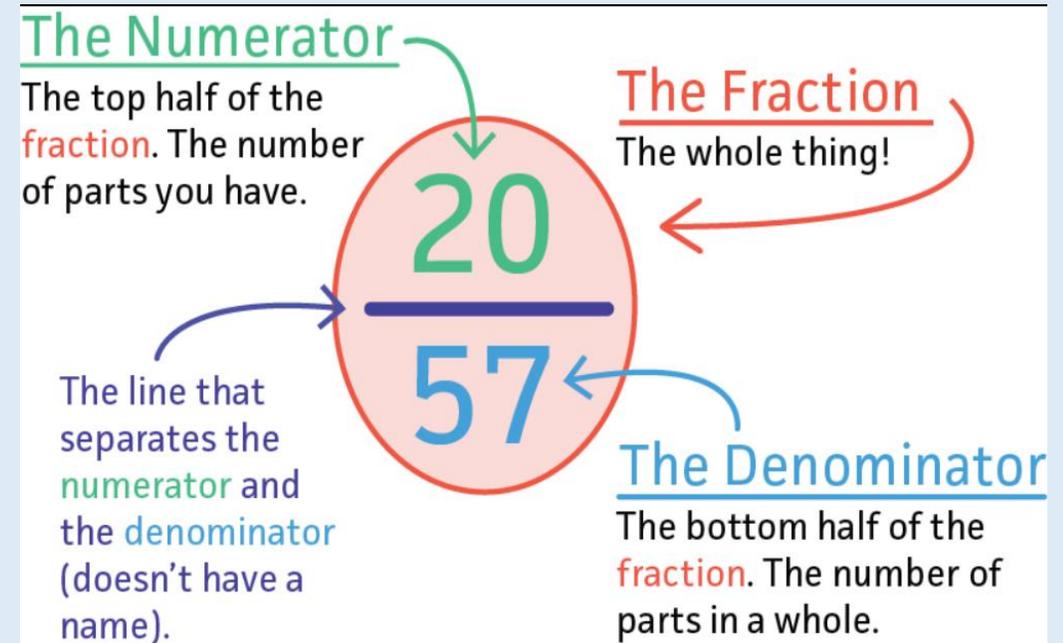


What is a fraction?

A fraction is defined as;

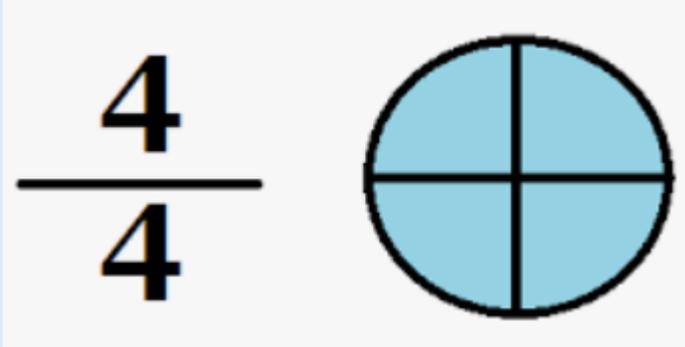
- Part of a **whole**.
- A figure or set of items which has been partitioned **equally**.

They have **numerators** and **denominators** to determine how the whole of something (all of it) is being split equally and how much of it is being represented (coloured/added/used).



What happens to fractions greater than 1?

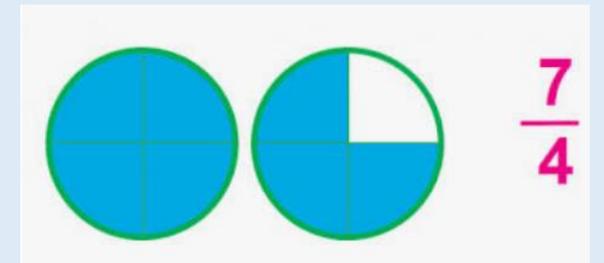
When a fraction has the same numerator as the denominator, it has a value of 1 whole.



As we can see here, the circle has been split into 4 part (**denominator**), however all 4 parts are coloured (**numerator**), So the whole of the circle has been coloured. This then has a value of 1 whole.

If the numerator is larger than the denominator, then we have a fraction that is more than 1.

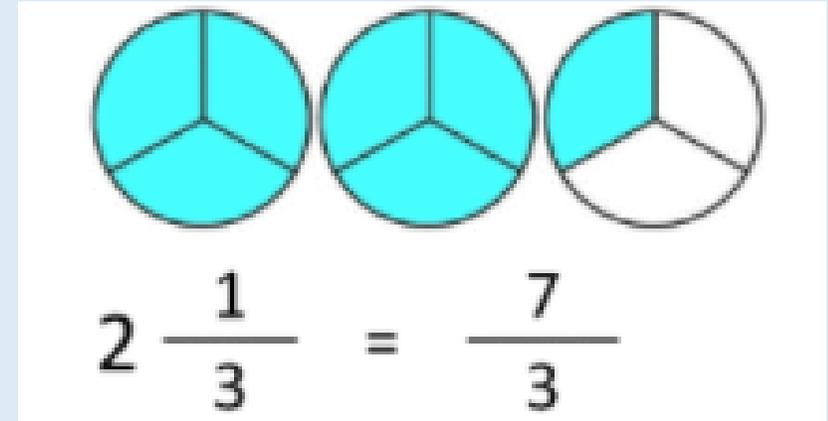
As we can see here, the circle has been split into quarters, the numerator states 7 quarters are coloured, so that means 1 whole circle and 3 quarters have been coloured.



Improper and mixed number fractions

A fraction that is greater than 1 can be written in 2 ways.

The example shows both ways.



2 whole circles have been shaded in and 1 extra third. This is called a **mixed number**. It uses a whole number and a fraction to represent it. $2 \frac{1}{3}$

&

Seven thirds have been shaded in. This is called an **improper fraction**. It is represented with a larger denominator than numerator. $\frac{7}{3}$

Identify mixed number and improper fractions

Here are a range of fractions with a value greater than 1.

Can you sort them into a table with mixed number on the left and improper fractions on the right.

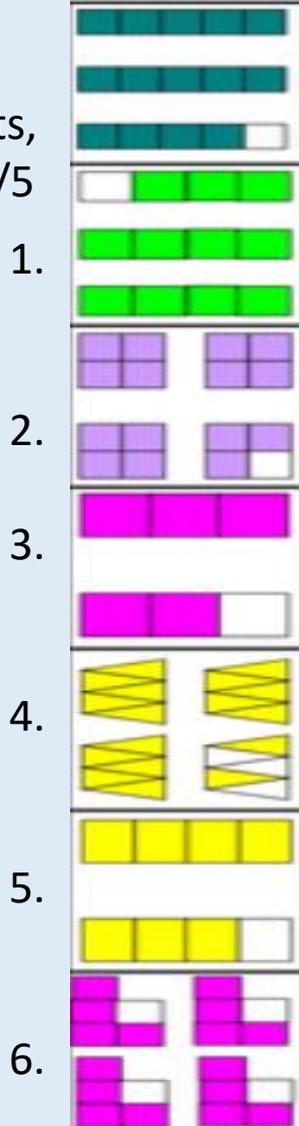
| Mixed number fraction | Improper fraction |
|-----------------------|-------------------|
| $2 \frac{1}{3}$ | $\frac{7}{3}$ |

| | | | | | |
|-----------------|----------------|----------------|-----------------|----------------|-----------------|
| $1 \frac{3}{4}$ | | $\frac{14}{5}$ | | | |
| $3 \frac{2}{5}$ | $\frac{19}{6}$ | $\frac{17}{5}$ | $\frac{9}{4}$ | | $2 \frac{1}{4}$ |
| | $\frac{13}{4}$ | | $3 \frac{1}{6}$ | $\frac{15}{4}$ | $3 \frac{1}{6}$ |

Identify these fractions

look at the visual representation of these fractions, can you write them as improper and mixed number fractions.

Improper- Each whole has been split into 5 parts, there are 14 parts shaded. So the fraction is $14/5$



Mixed number- There are 2 wholes, and the last whole has been split into 5 pieces, 4 of those pieces has been shaded. So the fraction is $2 \frac{4}{5}$.

Presentation in your books;

Example. $14/5$ or $2 \frac{4}{5}$

Convert from Mixed to improper

You can easily convert between mixed and improper fractions. By following 3 simple steps we can represent any mixed number with an improper fraction.

1. Start by multiplying the **whole** number by the **denominator**.
2. Next, add this **product** to the original numerator.
3. Finally, place this **sum** on top of the original denominator.

$$4 \frac{1}{3} - \quad 4 \times 3 = 12 + 1 = 13/3$$

Multiply the whole number by the denominator and add the numerator.

Keep the same denominator.

Then add.

$$4 \frac{1}{3} = \frac{13}{3}$$

Multiply.

Vocab reminder

Product; the answer when 2 or more numbers are multiplied.

Sum; the answer when 2 or more numbers are added.

Fluency

1) $3 \frac{2}{3} = \underline{\hspace{2cm}}$

2) $4 \frac{1}{4} = \underline{\hspace{2cm}}$

3) $2 \frac{3}{7} = \underline{\hspace{2cm}}$

4) $9 \frac{1}{2} = \underline{\hspace{2cm}}$

5) $5 \frac{3}{4} = \underline{\hspace{2cm}}$

6) $7 \frac{1}{5} = \underline{\hspace{2cm}}$

7) $4 \frac{5}{6} = \underline{\hspace{2cm}}$

8) $2 \frac{6}{9} = \underline{\hspace{2cm}}$

9) $3 \frac{9}{10} = \underline{\hspace{2cm}}$

10) $6 \frac{5}{7} = \underline{\hspace{2cm}}$

11) $8 \frac{3}{10} = \underline{\hspace{2cm}}$

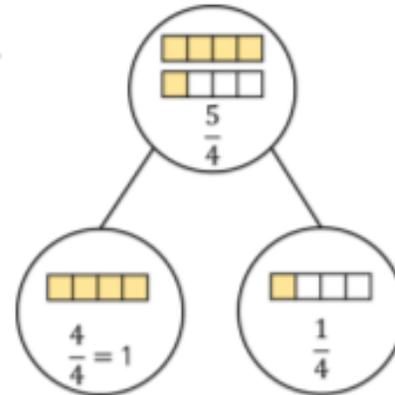
12) $4 \frac{7}{8} = \underline{\hspace{2cm}}$

Plenary-

Complete the part-whole models and sentences.

There are ___ quarters altogether.

___ quarters = ___ whole and ___ quarter.



Write sentences to describe these part-whole models.

