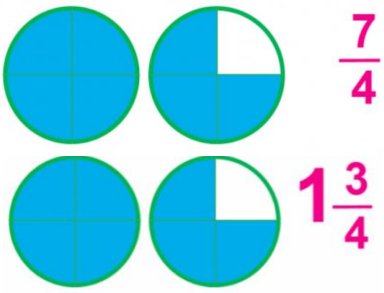
1.4.20

LO: To convert improper fractions to mixed number fractions.

Teach it

What is an improper fraction and what is a mixed number fraction?

An **improper fraction** is one that is 'top-heavy' so the **numerator** is bigger than the **denominator**:



A **mixed number** is made up of a whole number and a fraction:

The amount shown in the two circles is the same, but can be expressed as either:

- An **improper fraction**

(Where the **total number of parts coloured in** is counted and set against the **number of parts each whole shape has been split into**).

OR

- A **mixed number**

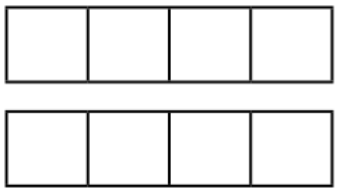
(Where we count the number of **whole shapes coloured in** and the number of **parts of the shape coloured in**).

To convert an **improper number** to a **mixed fraction**, you mist **divide** the numerator by the denominator (eg. 7 ÷ 4 = 1 r3). Your answer is the whole number and your remainder becomes the numerator of the fraction next to the whole number (eg. $1\frac{3}{4}$)

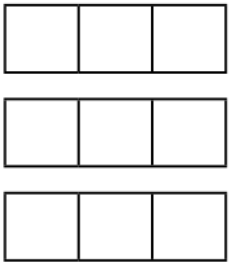
Do it

1. Draw the bar models into your book and colour them to represent the fractions shown. Complete the statements converting the improper fractions into mixed numbers.

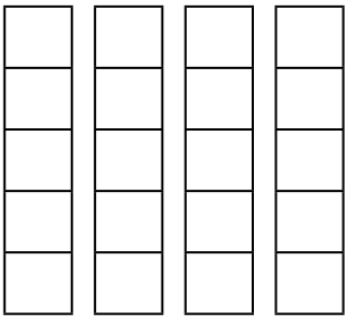
a) $\frac{5}{4}$ is equivalent to _____.



b) $\frac{8}{3}$ is equivalent to _____.



c) $\frac{16}{5}$ is equivalent to _____.



2. Now convert these improper fractions into mixed numbers. You can use drawings (or even Lego!) to help you.

a) $\frac{15}{6}$ = _____

b) $\frac{14}{4}$ = _____

c) $\frac{23}{5}$ = _____

d) $\frac{13}{4}$ = _____

Secure it

3. **SPOT THE MISTAKE!**
   a) What mistakes have been made?
   b) Can you find the right answers?

- $\frac{27}{5} = 5\frac{1}{5}$
- $\frac{27}{3} = 8$
- $\frac{27}{4} = 5\frac{7}{4}$
- $\frac{27}{10} = 20\frac{7}{10}$

Deepen it

4. Solve these improper to mixed number word problems:
5.
   a) A teacher asks some children to sort 73 tennis balls into baskets of 10 balls, filling the baskets where possible. Express how many baskets are filled using a mixed number.

   b) Twenty-seven children sit at tables of 6, filling the tables where possible. Express how many tables are filled using a mixed number.