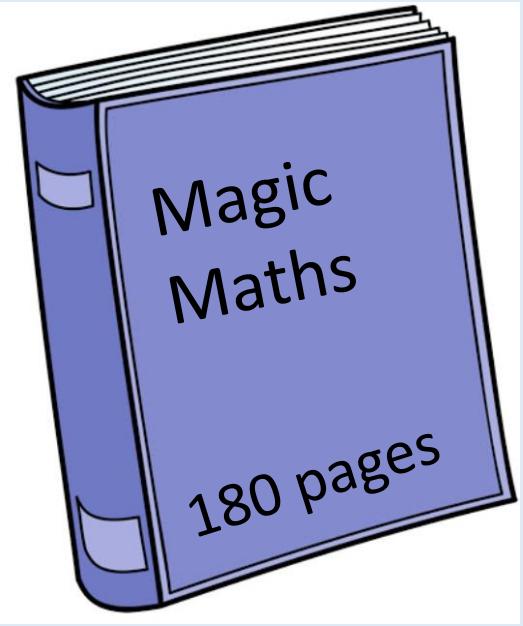
Maths- Fractions

Learning objective; Converting between fractions greater than 1

Warm up- Fraction of amount

Mr Rotherham has been looking at how much children have been reading over half term.
He wants to work out how many pages each child has read.

I read 2/3's of the book



I read 5/6's of the book

I read 2/5's of the book

Finding Fractions of Amounts

To find the fraction of an amount you need to divide your number by the **denominator**, then multiply your answer by the **numerator**.

$\frac{2}{6}$ of 72 ÷

72 divided by 6 = 12

Next, I need to multiply my answer by the **numerator**.

12 x 2 = 24

$\frac{2}{6}$ of 72 is therefore 24!

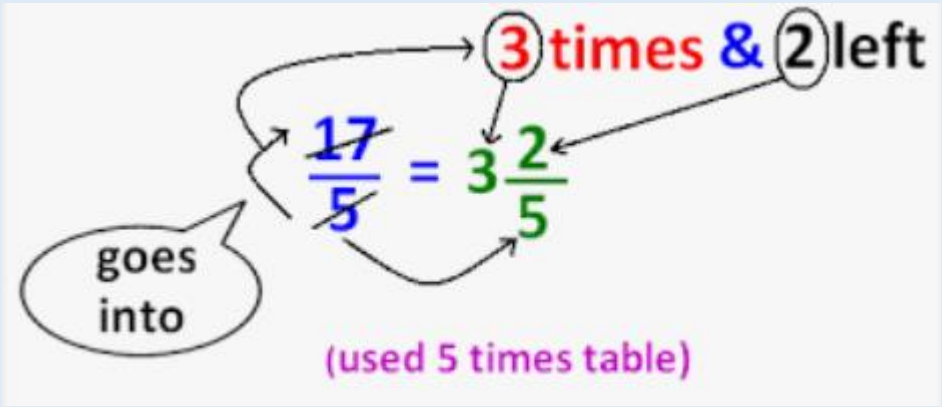
After discussions around last half term maths with some year 5 children I found we still have not got a concrete understanding around converting between fractions greater than 1.

Today we will revisit these.

Take a look at the slides reminding you of the methods then have a look at the fluency questions for each method.

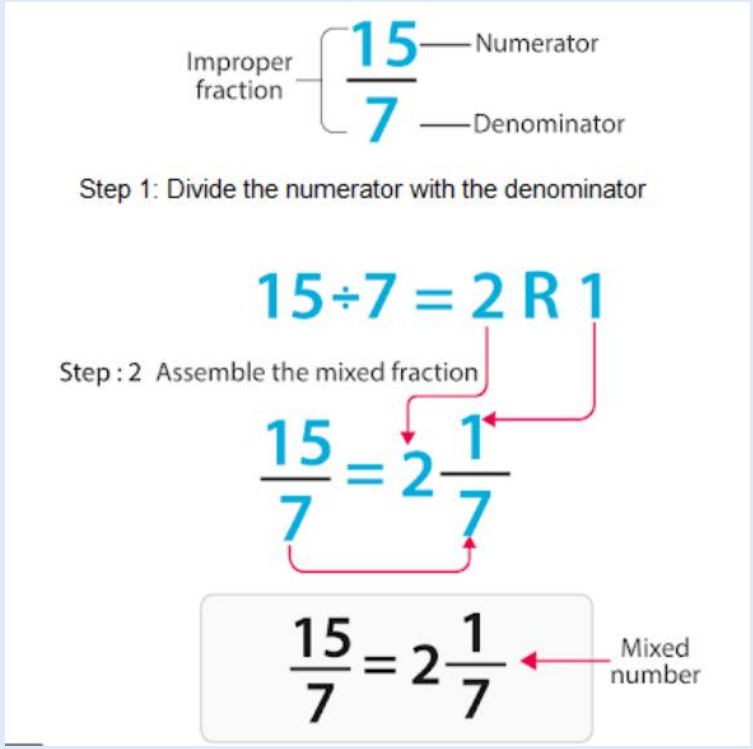
Then can you apply the methods at the end of the lesson to the mix of improper and mixed number fractions.

Converting from improper to mixed number



Just like converting from mixed number to improper fractions, we can follow a simple method to convert improper fractions into their mixed number equivalents.

1. Divide the **numerator** by the **denominator**.
2. Write down the **whole** number result.
3. Use the remainder as the new **numerator** over the original **denominator**.



https://www.youtube.com/watch?v=-imFslMIN1g

1*

Converting Improper Fractions to Mixed Numbers

1) $\frac{17}{5}$ = ____ 2) $\frac{64}{10}$ = ____ 3) $\frac{21}{10}$ = ____

4) $\frac{13}{4}$ = ____ 5) $\frac{30}{4}$ = ____ 6) $\frac{17}{3}$ = ____

Improper to mixed

- Divide the numerator by the denominator.
- The answer is your whole number.
- The left of turns into the numerator.
- The denominator stays the same.

2*

Converting Improper Fractions to Mixed Numbers

1) $\frac{7}{2}$ = ____ 2) $\frac{14}{3}$ = ____ 3) $\frac{33}{8}$ = ____

4) $\frac{48}{7}$ = ____ 5) $\frac{35}{9}$ = ____ 6) $\frac{17}{6}$ = ____

3*

Converting Improper Fractions to Mixed Numbers

1) $\frac{83}{32}$ = ____ 2) $\frac{51}{16}$ = ____ 3) $\frac{43}{8}$ = ____

4) $\frac{11}{2}$ = ____ 5) $\frac{5}{2}$ = ____ 6) $\frac{220}{32}$ = ____

1*

Converting Improper Fractions to Mixed Numbers

1) $\frac{17}{5} = 3\frac{2}{5}$ 2) $\frac{64}{10} = 6\frac{2}{5}$ 3) $\frac{21}{10} = 2\frac{1}{10}$

4) $\frac{13}{4} = 3\frac{1}{4}$ 5) $\frac{30}{4} = 7\frac{1}{2}$ 6) $\frac{17}{3} = 5\frac{2}{3}$

2*

Converting Improper Fractions to Mixed Numbers

1) $\frac{7}{2} = 3\frac{1}{2}$ 2) $\frac{14}{3} = 4\frac{2}{3}$ 3) $\frac{33}{8} = 4\frac{1}{8}$

4) $\frac{48}{7} = 6\frac{6}{7}$ 5) $\frac{35}{9} = 3\frac{8}{9}$ 6) $\frac{17}{6} = 2\frac{5}{6}$

3*

Converting Improper Fractions to Mixed Numbers

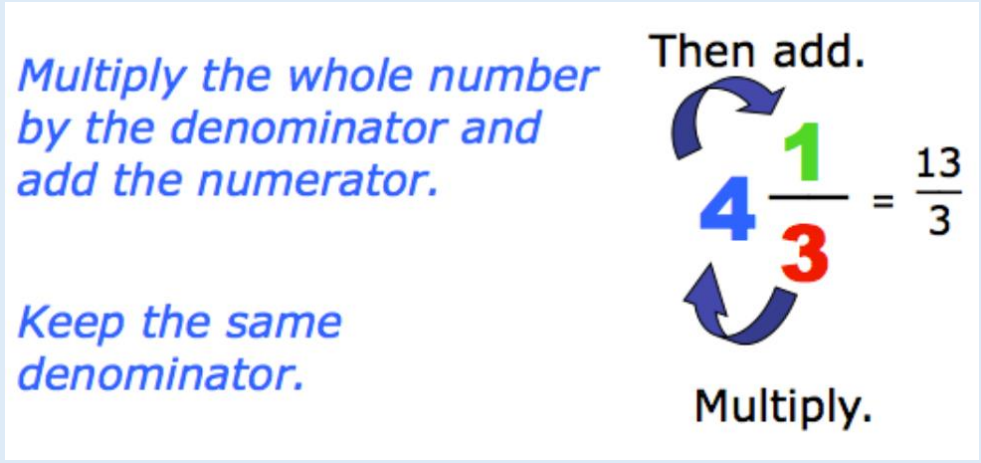
1) $\frac{83}{32} = 2\frac{19}{32}$ 2) $\frac{51}{16} = 3\frac{3}{16}$ 3) $\frac{43}{8} = 5\frac{3}{8}$

4) $\frac{11}{2} = 5\frac{1}{2}$ 5) $\frac{5}{2} = 2\frac{1}{2}$ 6) $\frac{220}{32} = 6\frac{7}{8}$

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.



https://www.youtube.com/watch?v=shpf9krdXQQ

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Converting Mixed Numbers to Improper Fractions

1) $7\frac{9}{10} =$ ___ 2) $4\frac{2}{3} =$ ___ 3) $4\frac{1}{2} =$ ___

4) $9\frac{2}{3} =$ ___ 5) $5\frac{3}{5} =$ ___ 6) $6\frac{1}{2} =$ ___

Mixed to improper

- Multiply the whole number by denominator.
- Add the numerator to that product.
- Place that sum over the original denominator.

2*

1) $8\frac{7}{9} =$ ___ 2) $3\frac{7}{10} =$ ___ 3) $9\frac{9}{10} =$ ___

4) $5\frac{1}{2} =$ ___ 5) $7\frac{1}{5} =$ ___ 6) $8\frac{1}{4} =$ ___

3*

Converting Mixed Numbers to Improper Fractions

1) $2\frac{7}{8} =$ ___ 2) $8\frac{11}{64} =$ ___ 3) $5\frac{3}{32} =$ ___

4) $8\frac{5}{8} =$ ___ 5) $2\frac{27}{32} =$ ___ 6) $9\frac{1}{2} =$ ___

1*

Converting Mixed Numbers to Improper Fractions

1) $7\frac{9}{10} = \frac{79}{10}$ 2) $4\frac{2}{3} = \frac{14}{3}$ 3) $4\frac{1}{2} = \frac{9}{2}$

4) $9\frac{2}{3} = \frac{29}{3}$ 5) $5\frac{3}{5} = \frac{28}{5}$ 6) $6\frac{1}{2} = \frac{13}{2}$

2*

1) $8\frac{7}{9} = \frac{79}{9}$ 2) $3\frac{7}{10} = \frac{37}{10}$ 3) $9\frac{9}{10} = \frac{99}{10}$

4) $5\frac{1}{2} = \frac{11}{2}$ 5) $7\frac{1}{5} = \frac{36}{5}$ 6) $8\frac{1}{4} = \frac{33}{4}$

3*

Converting Mixed Numbers to Improper Fractions

1) $2\frac{7}{8} = \frac{23}{8}$ 2) $8\frac{11}{64} = \frac{523}{64}$ 3) $5\frac{3}{32} = \frac{163}{32}$

4) $8\frac{5}{8} = \frac{69}{8}$ 5) $2\frac{27}{32} = \frac{91}{32}$ 6) $9\frac{1}{2} = \frac{19}{2}$

On this page are a wide range of fractions above 1. Choose one and decide which type of fraction it is, then remind yourself which method you need to use to convert it to the other.

$\frac{3}{4}$	$5\frac{2}{4}$	$\frac{19}{3}$	$\frac{5}{9}$	$\frac{3}{9}$
$\frac{5}{6}$	$\frac{3}{3}$	$2\frac{4}{6}$	$\frac{22}{5}$	$\frac{6}{7}$
$\frac{5}{6}$	$4\frac{3}{4}$	$\frac{24}{6}$	$5\frac{2}{3}$	$\frac{13}{5}$
$\frac{3}{3}$	$7\frac{1}{3}$	$\frac{2}{3}$	$\frac{3}{5}$	$2\frac{5}{8}$