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Grade 8 mathematics revision

Convert Improper Fractions To Mixed Numbers

To change an improper fraction to a mixed number we divide the numerator by the denominator.

The quotient (the result of division) is the whole number of the mixed number.

The remainder is the numerator of the fractional part of the mixed number.

Example:

Write the improper fraction $\frac{11}{4}$ as a mixed number.

Solution:

$$\begin{array}{r} 2 \\ 4 \overline{) 11} \\ \underline{- 8} \\ 3 \end{array} \rightarrow 2\frac{3}{4}$$

If there were no remainder the improper fraction would simplify to a whole number.

For example

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

To convert from an improper fraction to a mixed number

- Divide the numerator by the denominator.
- Write down the whole number.
- Place any remainder in the quotient over the denominator.
- Simplify the fraction if needed.

Convert Mixed Numbers To Improper Fractions

When converting mixed numbers to improper fractions, we calculate the numerator in the following steps:

Step 1: Multiply the whole number by the denominator.

Step 2: Add to the numerator of the fractional part.

The denominator is not changed.

Example

Write the mixed number $2\frac{3}{4}$ as an improper fraction.

Solution:

$$\begin{aligned} 2\frac{3}{4} &= \frac{(4 \times 2) + 3}{4} && \begin{array}{l} \text{Multiply the whole number by} \\ \text{the denominator} \end{array} \\ &= \frac{8 + 3}{4} && \text{Denominator is unchanged} \\ &= \frac{11}{4} \end{aligned}$$