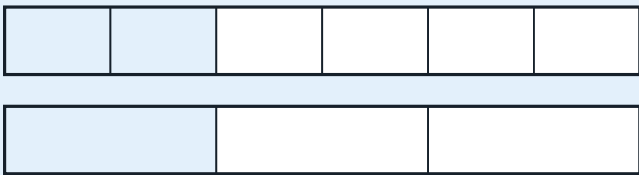


Equivalent ratios and simplifying ratios

MODULE 4 · RATIO AND PROPORTION NUMBER

Multiplying or dividing **both parts by the same number** gives an **equivalent ratio**. Dividing by the HCF gives simplest form.



- 4 : 6 = 2 : 3 (divide both by 2).
- 2 : 5 = 6 : 15 (multiply both by 3).

SIMPLIFY THE RATIO 12 : 18

- 1 Find the HCF of 12 and 18 → 6.
- 2 Divide both parts by 6: $12 \div 6 = 2$, $18 \div 6 = 3$.
- 3 Simplest form is 2 : 3.

HOW TO ANSWER TODAY

- **Share in a ratio.** Add the ratio parts. Divide the total by that number to find ONE part. Multiply each ratio number by it.
 Share €90 in 2:3 → 5 parts, $€90 \div 5 = €18$ per part → €36 and €54

WARM-UP

- 1 Saoirse is designing a mosaic for the school library wall using blue tiles and green tiles in the ratio **1:2**. She uses **3** blue tiles in the first row. How many green tiles does she need so the ratio stays the same?
 Fill in the missing number to make equivalent ratios: $1:2 = 3:?$
- 2 5th class sell **28** tickets for the Christmas hamper raffle. The tickets are bought by teachers and pupils in the ratio **1:3**. How many tickets do the teachers buy, and how many do the pupils buy?
 Share 28 in the ratio 1:3.

PRACTICE

- 1 Sean is drawing a Cumann na mBunscol pitch to scale on squared paper. The real pitch uses a ratio of **5 metres** across to **2 metres** down, and on his drawing **20** squares across must match the same shape. How many squares down should he draw to make the ratio **5:2** equal to **20 : ?**
 Fill in the missing number to make equivalent ratios: $5:2 = 20:?$
- 2 Cian, Saoirse and Tadhg share out **35** library books to carry back to the classroom in the ratio **1:2:4**. How many books does each child carry?