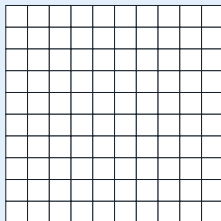


# Ratio, proportion and percentage links

MODULE 4 · RATIO AND PROPORTION NUMBER

Ratios, fractions and percentages are connected. A part-to-whole ratio can be written as a fraction and a percentage.



→ 2 : 3 means 2 out of 5 →  $\frac{2}{5} = 40\%$  of the whole.

## HOW TO ANSWER TODAY

- **Compare fractions.** Make the bottom numbers (denominators) the same first. Then compare the top numbers.

$\frac{1}{4}$  and  $\frac{1}{3} \rightarrow \frac{3}{12}$  and  $\frac{4}{12} \rightarrow \frac{1}{4} < \frac{1}{3}$

- **Discount / increase.** Work out the percent of the price, then take it off (discount) or add it on (increase).

€80 with 15% off → 15% of €80 = €12 → €80 - €12 = €68

## WARM-UP

- 1 In the school polytunnel, 5th class plant 1 row of carrots for every 3 rows of lettuce. This spring they plant 3 rows of carrots. To keep the same ratio of 1:3, how many rows of lettuce should they plant?

Fill in the missing number to make equivalent ratios:  $1:3 = 3:?$

- 2 For 5th class's breakfast morning, Cian pours 1  $\frac{1}{2}$  litres of milk into the big porridge pot, then adds another 3  $\frac{1}{2}$  litres from a second jug. How many litres of milk are in the pot altogether?

$1 \frac{1}{2} + 3 \frac{1}{2} = ?$

## PRACTICE

- 1 Three pupils in 5th class have filled their water bottles before heading out to the yard. Oisín's bottle is  $\frac{3}{4}$  full, Aoife's is  $\frac{7}{8}$  full, and Tadhg's is  $\frac{1}{5}$  full. Order the bottles from least full to most full.

Order from smallest to largest:  $\frac{3}{4}$ ,  $\frac{7}{8}$ ,  $\frac{1}{5}$

- 2 Síle bakes a Halloween barmbrack and decorates the top with a  $10 \times 10$  grid of raisins and sultanas. She uses raisins on 64 of the 100 squares and sultanas on the rest. What percent of the grid is covered in raisins?

On a  $10 \times 10$  grid, 64 of the 100 small squares are shaded. What percent is shaded?

## CHALLENGE

- 1 140 pupils from 5th class are going on the school tour to the Cliffs of Moher in Clare. 15% of the pupils have chosen the guided walk along the cliff path. How many pupils have chosen the guided walk?

What is 15% of 140?

- 2 A picnic hamper for the 5th class trip costs €180 at the local Centra deli. The shop gives the class a 15% discount because they are ordering for a school event. What is the new price of the hamper?

€180 is reduced by 15%. What is the new price?