

Two-step equations: informal solving

MODULE 8 · ALGEBRA — PATTERNS, EXPRESSIONS AND EQUATIONS

ALGEBRA

HOW TO ANSWER TODAY

- **Solve in two steps.** Undo the + or – first, then undo the × or ÷.

$$2x + 5 = 13 \rightarrow 2x = 8 \rightarrow x = 4$$

★ STRETCH PROBLEMS

- 1 On sports day, 5th class need to set out cones for the relay stations. The caretaker shares the cones equally between 12 relay stations, x cones each. He then takes 11 of them back for the long jump, which leaves 121 cones at the stations. If $12x - 11 = 121$, how many cones did each relay station get at first?

Find x so the scale balances.

- 2 5th class are heading on a school tour to the Cliffs of Moher. The total cost is €58, made up of a €13 coach charge plus €9 per pupil for the visitor centre ticket. How many pupils, x , are going on the tour?

Find x so the scale balances.

- 3 Saoirse packs the same number of grapes into each of 4 small pots in her lunchbox, then adds 9 extra grapes loose on top. Altogether her lunchbox holds 45 grapes. If x is the number of grapes in each pot, solve $4x + 9 = 45$ to find how many grapes are in each pot.

Find x so the scale balances.

- 4 On Monday morning Ms Ní Bhriain takes the roll in 5th class. She notices that 4 times the number of pupils on each table, take away 12 pupils who are out at hurling training, gives 32 pupils still in the room. How many pupils are on each table?

Find x so the scale balances.

- 5 Granny gives the same number of sweets to each of her 5 grandchildren after Sunday dinner. They put 10 sweets back into the tin to share later, leaving 25 sweets on the table. If x is the number of sweets each child got, then $5x - 10 = 25$. What is x ?

Find x so the scale balances.