

Using a letter or word for the unknown ($a + 3 = 10$)

MODULE 10 · ALGEBRA — PATTERNS, RULES AND NUMBER SENTENCES ALGEBRA

HOW TO ANSWER TODAY

- **Solve for x.** Do the OPPOSITE operation to both sides. + becomes -; $\times$ becomes $\div$.

$$x + 7 = 15 \rightarrow x = 15 - 7 = 8 \quad 3x = 21 \rightarrow x = 21 \div 3 = 7$$

★ STRETCH PROBLEMS

- 1 The school library shares its new books equally onto **12** shelves, putting **30** books on each shelf. If x stands for the total number of new books, then $x \div 12 = 30$. What is x ?

Find x so the scale balances.

- 2 On the coach trip to the Burren in Clare, some pupils get off at the first stop. After **4** pupils leave, there are **19** pupils still on the coach. If x is the number of pupils who started the trip, solve $x - 4 = 19$ to find how many pupils began the journey.

Find x so the scale balances.

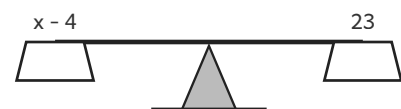
- 3 The class shares out the birdseed for the window feeder into **6** equal jars. Each jar holds **28 grams** of seed. The whole bag holds x grams. Solve for x in the equation $x \div 6 = 28$.

Find x so the scale balances.

- 4 At granny's farm, some calves were let out into the far field. After **8** of them wandered back into the shed, **14** calves were left grazing in the field. If x is the number of calves that started in the field, then $x - 8 = 14$. How many calves started in the field?

Find x so the scale balances.

- 5 On sports day, Oisín had some points for his team. After **4** points were taken away for a false start, his team had **23** points left. If x stands for the points Oisín's team started with, solve $x - 4 = 23$ to find how many points they began with.

Find x so the scale balances.