

Turning word problems into number sentences

MODULE 10 · ALGEBRA — PATTERNS, RULES AND NUMBER SENTENCES

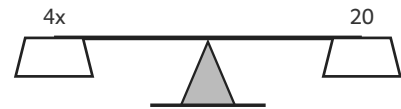
ALGEBRA

HOW TO ANSWER TODAY

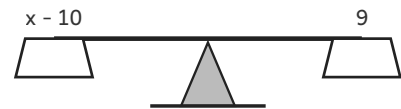
- **Solve for x.** Do the OPPOSITE operation to both sides. + becomes −; × becomes ÷.
 $x + 7 = 15 \rightarrow x = 15 - 7 = 8$ $3x = 21 \rightarrow x = 21 \div 3 = 7$
- **Function machine.** Do EACH step of the rule in order to the input.

STRETCH PROBLEMS

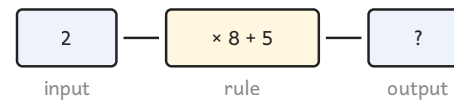
- 1 At the school sports day, 4 relay teams each have the same number of runners. Altogether there are 20 runners taking part. If x is the number of runners on each team, so that $4x = 20$, how many runners are on each team?

Find x so the scale balances.

- 2 Aoife watches the classroom bird feeder. After 10 birds fly away, 9 birds are still feeding. If x is the number of birds at the start, then $x - 10 = 9$. How many birds were there at the start?

Find x so the scale balances.

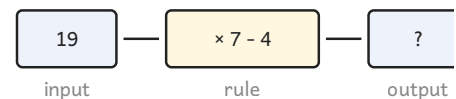
- 3 Mr Ó Braonáin sets up a function machine on the whiteboard while 3rd class line up for the yard. The rule is multiply by 8, then add 5. If Tadhg feeds in the number 2, what number comes out?



- 4 Cian is stacking milk cartons in the school canteen fridge. After he adds 7 more cartons, there are 32 cartons in total. If x stands for the number of cartons that were already there, solve $x + 7 = 32$ to find how many cartons he started with.

Find x so the scale balances.

- 5 At Camogie training, Aoife uses a scoring machine with the rule multiply by 7, then subtract 4. She feeds in the number 19. What number comes out?



x y



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x y

