

Writing expressions from word situations

MODULE 10 · ALGEBRA — PATTERNS, EXPRESSIONS AND EQUATIONS

ALGEBRA

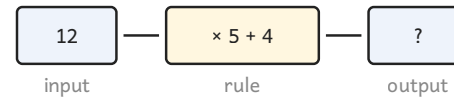
HOW TO ANSWER TODAY

- **Function machine.** Do EACH step of the rule in order to the input.
- **Letter expressions.** A letter stands for a number. Swap the letter for its value, then work out the answer.

If $n = 3$, then $2n + 5 = 2 \times 3 + 5 = 11$

★ STRETCH PROBLEMS

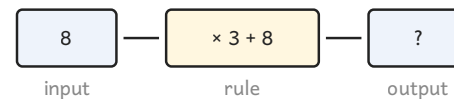
- 1 Aoife's granny is baking barmbrack for the Halloween weekend. Each loaf needs 5 spoons of sultanas plus 4 extra spoons for the topping. If she bakes 12 loaves, how many spoons of sultanas does she use altogether?



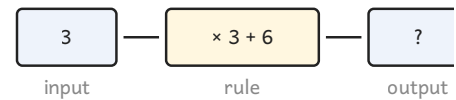
- 2 On the sponsored cycle around the school cycle path, Tadhg cycles $2n + 7$ laps, where n is the number of laps his younger sister completes. If $n = 5$, how many laps does Tadhg cycle?

If $n = 5$, what is the value of $2n + 7$?

- 3 Múinteoir draws a function machine on the whiteboard during 5th class maths. The rule on the machine is $\times 3 + 8$. Saoirse puts in the number 8. What number comes out?



- 4 Cian and his friends play a lunchtime soccer match in the schoolyard. They score 3 goals using a rule for points: multiply the goals by 3, then add 6 bonus points for fair play. How many points do they get in total?



- 5 On the sponsored cycle, Tadhg plans to do 3 laps of the cycle path at n kilometres per lap, but he stops 1 kilometre short on his final lap. The total distance he cycles is $3n - 1$ kilometres. If $n = 7$, how many kilometres does Tadhg cycle?

If $n = 7$, what is the value of $3n - 1$?