

Equivalent expressions ($4 + 4 + 4 = 3 \times 4$)

MODULE 10 · ALGEBRA — PATTERNS, RULES AND NUMBER SENTENCES

ALGEBRA

HOW TO ANSWER TODAY

- **Property names.** Order swaps ($a + b = b + a$) → commutative. Brackets move ($((a+b)+c = a+(b+c))$) → associative. One spreads over two ($a(b+c) = ab+ac$) → distributive.
 $5 + 3 = 3 + 5$ → commutative · $2 \times (4 + 5) = 2 \times 4 + 2 \times 5$ → distributive

 STRETCH PROBLEMS

- 1** Mr Ó Briain pins a maths chart on the 4th class noticeboard showing $(9 \times 9) \times 4 = 9 \times (9 \times 4)$. Which property of operations does the equation show: commutative, associative, or distributive?

Which property of operations does this equation show: $(9 \times 9) \times 4 = 9 \times (9 \times 4)$? (Choose: commutative, associative, or distributive.)

- 2** Cian and his sister Aoife are checking their maths homework at the kitchen table. Aoife says that $(7 \times 9) \times 2 = 7 \times (9 \times 2)$ without doing the sum. Which property of operations is she using: commutative, associative, or distributive?

Which property of operations does this equation show: $(7 \times 9) \times 2 = 7 \times (9 \times 2)$? (Choose: commutative, associative, or distributive.)