Square facts: answers and notes

What your child practised: what the ² sign means, working out squares up to 12 × 12, spotting square numbers and solving problems with them (Year 5 maths).

Page 1 · Warm up

3^2 = **9** · 6^2 = **36** · 10^2 = **100** · 1^2 = **1** · 9^2 = **81**

Page 2 · Square patio

Totals: **1, 4, 9, 16, 25**, and 6 by 6 = **36**. Added: **3, 5, 7, 9**, then **11**. The odd numbers in order.

Page 2 · A. Ring the squares

16, 36, 64, 81, 100, 121. Not 14, 18, 24, 50, 80 or 90.

Page 3 · B. The table

2^2 = **4** · 4^2 = **16** · 6^2 = **36**
8^2 = **64** · 10^2 = **100** · 12^2 = **144**

Page 3 · C. Backwards

7^2 = 49 · **10^2** = 100 · **12^2** = 144 · **3^2** = 9

Page 3 · D. Problems

36 slabs (6 × 6) · **49** · 9 + 16 = **25**, which is 5^2, so yes.

Page 3 · Challenge

No. 7^2 = 7 × 7 = **49**. Sam has doubled 7 (7 × 2 = 14).

Watch out for

- **Squaring as doubling** (7^2 as 14). Read ² aloud as "times itself" and draw the dot square: 7 rows of 7.
- **Reading 4^2 as 42.** Point out that the little 2 is raised and smaller: it is an instruction, not a digit.
- **Mixing up 9^2 and 3^2.** 81 is 9^2; 9 is 3^2. Ask "what times itself?"

Going further (5 minutes, no paper)

- **Square snap:** say a number up to 12; your child says its square. Then swap: say a square, they say the number.
- **Spot the squares:** chessboards (8 × 8 = 64 squares), tiles, window panes.
- **In the game:** Chapter 5, Cube Castle, builds cube numbers from layers of squares.