

Square Numbers

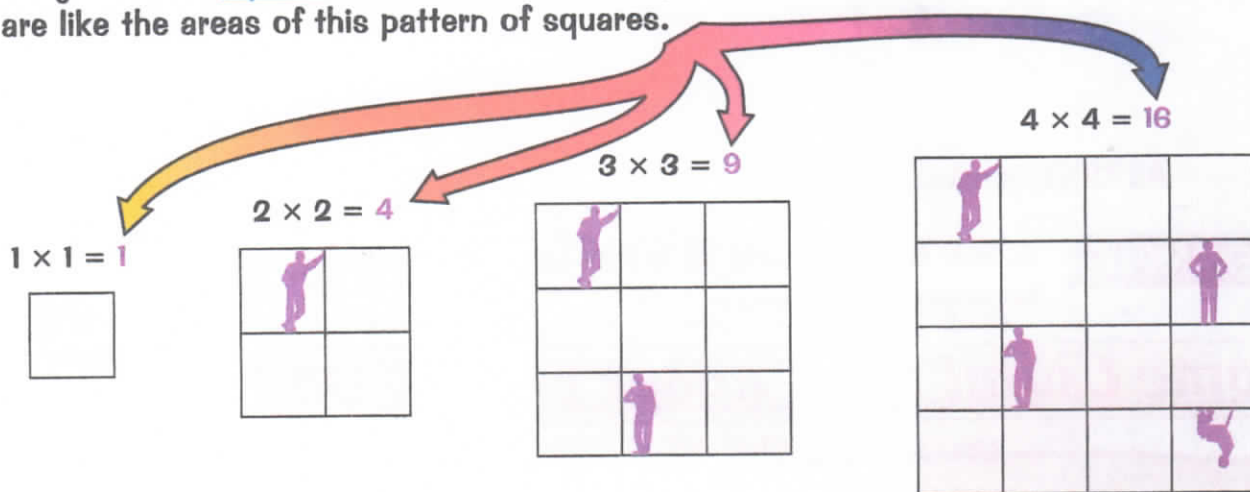
Square Numbers

When a number is multiplied by itself, the result is a **SQUARE NUMBER**.

1 4 9 16 25 36 49 64 81 100 121 144...

(1×1) (2×2) (3×3) (4×4) (5×5) (6×6) (7×7) (8×8) (9×9) (10×10) (11×11) (12×12)...

They're called **square numbers** because they are like the areas of this pattern of squares.



To save time, we write 5^2 for five squared, so this sequence becomes $1^2, 2^2, 3^2, 4^2, \dots$

EXAMPLE:

- $7^2 = 7 \text{ squared} = 7 \times 7 = 49.$
- $4^2 = 4 \text{ squared} = 4 \times 4 = 16.$
- $15^2 = 15 \text{ squared} = 15 \times 15 = 225.$

Questions often ask you to pick out the squares from a list of numbers. Start by writing down all the square numbers until you get past the highest number in the list (work them out on a calculator if you can't remember them).

SQUARE numbers just work too hard...

- Turn over the page and write down the first 10 square numbers.
- Pick out all the squares from this list: 216, 36, 99, 121, 4, 8, 64, 343.
- Work out the following: $11^2, 20^2, 12^2, 100^2$.