

Square Numbers

Square numbers are numbers that are the result of multiplying a number by itself. For example:

$3 \times 3 = 9$ Nine is a square number

$5 \times 5 = 25$ Twenty-five is a square number

1. Learn all of the square numbers up to 12×12
2. Get nine small objects (smarties, pennies etc) and arrange them in a square. Think about why these numbers are arranged as a square.
3. If you have enough objects, then arrange 16 into a square.
4. Now try arranging 15 objects into a square? What do you notice?

Square numbers use a little 2 as a symbol, so 7 squared is written 7^2 .

5. Try these:

Example: $3^2 + 5^2 = 9 + 25 = 34$

- a. $4^2 + 6^2 =$
- b. $10^2 + 7^2 =$
- c. $9^2 + 8^2$
- d. $9^2 - 4^2 =$
- e. $12^2 - 7^2 =$

Get someone to keep testing you to see if you can learn those square numbers for instant recall. Which square number is the same backwards as forwards?

Challenge: Can you work out all of the square numbers between (and including) 13^2 and 20^2 .

CLUE : $13^2 = 13 \times 10$ add 13×3