

Key Instant Recall Facts

Year 5 Summer 2

We believe that the rapid recall of key facts underpins the success and progress of all in maths. Children will be introduced to their key facts at the beginning of each half term and then practise them regularly in class. Children will then be expected to practise these key facts at home.

The key fact this half term is

To recall square (up to 12^2) and cube numbers (up to 5^3 and 10^3)

Key Facts

Square numbers:

$$1^2 = 1 \times 1 = 1$$

$$2^2 = 2 \times 2 = 4$$

$$3^2 = 3 \times 3 = 9$$

$$4^2 = 4 \times 4 = 16$$

$$5^2 = 5 \times 5 = 25$$

$$6^2 = 6 \times 6 = 36$$

$$7^2 = 7 \times 7 = 49$$

$$8^2 = 8 \times 8 = 64$$

$$9^2 = 9 \times 9 = 81$$

$$10^2 = 10 \times 10 = 100$$

$$11^2 = 11 \times 11 = 121$$

$$12^2 = 12 \times 12 = 144$$

Cube numbers:

$$1^3 = 1 \times 1 \times 1 = 1$$

$$2^3 = 2 \times 2 \times 2 = 8$$

$$3^3 = 3 \times 3 \times 3 = 27$$

$$4^3 = 4 \times 4 \times 4 = 64$$

$$5^3 = 5 \times 5 \times 5 = 125$$

$$10^3 = 10 \times 10 \times 10 = 1000$$

Key Vocabulary

What is 7 **squared**?

What is 7 **multiplied by itself**?

Is 30 a **square number**?

What is 2 **cubed**?

Is 9 a **cube number**?

A square number is the product of two numbers which are the same.

A cube number is the product of three numbers which are the same.

MAKE IT FUN

Using card or paper make a set of cubes with the following side lengths—1cm/2cm/3cm/4cm/5cm. What are the volumes?

<http://nrich.maths.org/1151>

Cycling Squares – a challenge involving square numbers.

Can you complete the challenge and then create your own examples?

For each of the following, try a few examples and see what you notice:

Add two consecutive square numbers and then subtract 1

Square any odd number, then subtract 1

Multiply two consecutive odd numbers and then add 1

Multiply two consecutive even numbers and then add 1

add 1

Can you explain what you've noticed? Can you prove that it will always happen?

MAKE IT LINK

[What are square and cube numbers? - BBC Bitesize](#)

<https://www.topmarks.co.uk/maths-games/hit-the-button> - select the square numbers

https://www.transum.org/Maths/Game/Square_Pairs/default.asp

<https://nrich.maths.org/2280>

<https://nrich.maths.org/1150>

<https://nrich.maths.org/89>

DEEPEN IT



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