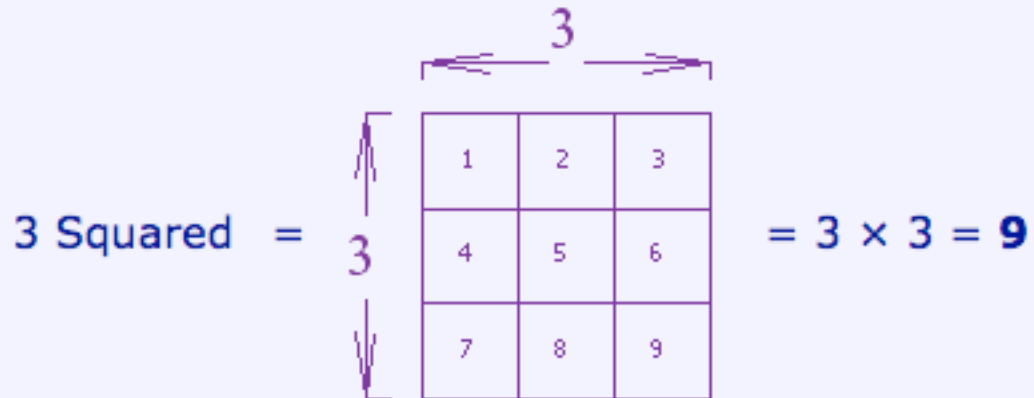


Squares and Square Roots

How to Square A Number

To square a number, just multiply it by itself ...

Example: What is 3 squared?



What is 3 squared?

$$3 \text{ Squared} = 3^2 = 3 \cdot 3 = 9$$

The square root of 9 is 3 and is written as $\sqrt{9}$

"Squared" is often written as a little 2 like this:

$4^2 = 16$

This means squared or 4 to the second power

This says "4 Squared equals 16"
(the little 2 means the number appears twice in multiplying)

Squares From 12 to 62

1 Squared	=	1^2	=	$1 \cdot 1$	=	1
2 Squared	=	2^2	=	$2 \cdot 2$	=	4
3 Squared	=	3^2	=	$3 \cdot 3$	=	9
4 Squared	=	4^2	=	$4 \cdot 4$	=	16
5 Squared	=	5^2	=	$5 \cdot 5$	=	25
6 Squared	=	6^2	=	$6 \cdot 6$	=	36

We can also say 4 to the second power

You can also find the squares on the multiplication table:

1	2	3	4	5	6
2	4	6	8	10	12
3	6	9	12	15	18
4	8	12	16	20	24
5	10	15	20	25	30
6	12	18	24	30	36

Negative Numbers

You can also square negative numbers.

Example: What is -5 squared ?

Answer:

$$(-5) \times (-5) = \mathbf{25}$$

(because a negative times a negative gives a positive)

Answer:

$$(-5) (-5) = 25$$

(because a negative times a negative gives a positive)

That was interesting!

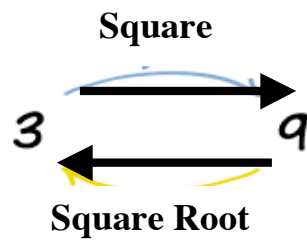
When you square a negative number you get a positive result.

Just the same as if you had squared a positive number:

$$\left. \begin{array}{l} 5 \times 5 = 25 \\ -5 \times -5 = 25 \end{array} \right\} \text{ Same Answer!}$$

Square Root

A **square root** goes the other way:



3 squared is 9, so a **square root of 9 is 3**

A square root of a number is ...

... a value that can be **multiplied by itself** to give the original number.

A square root of **9** is ...

... **3**, because **when 3 is multiplied by itself** you get **9**.

It is like asking:

What can I multiply by itself to get this?



Note: When you see "root" think

"I know the tree, but what is the root that produced it?"

In this case the tree is "9", and the root is "3".

Here are some more squares and square roots:

	Square \rightarrow	
	Square Root \leftarrow	
4		16
5		25
6		36

