

# **Find-The Square Root:**

√-Square Root

PERFECT SQUARES AND THEIR ROOTS		
$1^2 = 1$	$11^2 = 121$	$21^2 = 441$
$2^2 = 4$	$12^2 = 144$	$22^2 = 484$
$3^2 = 9$	$13^2 = 169$	$23^2 = 529$
$4^2 = 16$	$14^2 = 196$	$24^2 = 576$
$5^2 = 25$	$15^2 = 225$	$25^2 = 625$
$6^2 = 36$	$16^2 = 256$	$26^2 = 676$
$7^2 = 49$	$17^2 = 289$	$27^2 = 729$
$8^2 = 64$	$18^2 = 324$	$28^2 = 784$
$9^2 = 81$	$19^2 = 361$	$29^2 = 841$
$10^2 = 100$	$20^2 = 400$	$30^2 = 900$

```
Square Root of x = \sqrt{x} = x^{\frac{1}{2}}
\sqrt{x} = \sqrt{(y \times y)} = y
where
y is the square root of any number x
```

#### **Square Root Formula**

The square root formula of a number, x is given as,

```
\sqrt{\mathbf{x}} = \mathbf{x}^{1/2}
```

Suppose, x is any number such that,  $x = y \times y$ , the formula to calculate the square root of x will be,

```
\sqrt{x} = \sqrt{(y \times y)} = y
```

where, y is the square root of any number x. This also means that if the value of y is an integer, then x would be a perfect square.

## Math.sqrt(number)

The Math.sqrt() function returns the square root of a number.

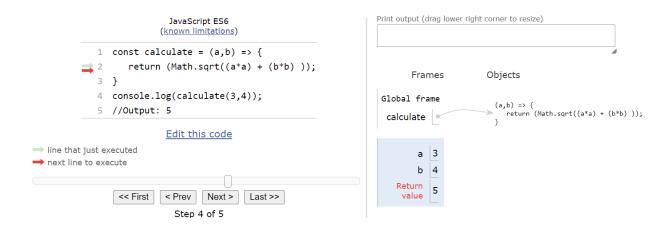
### Example-1

```
console.log(Math.sqrt(5));
//Output: 25
```

## Example-2

```
const calculate = (a,b) => {
   return (Math.sqrt((a*a) + (b*b) ));
}
console.log(calculate(3,4));
//Output: 5
```

Find-The Square Root: 1

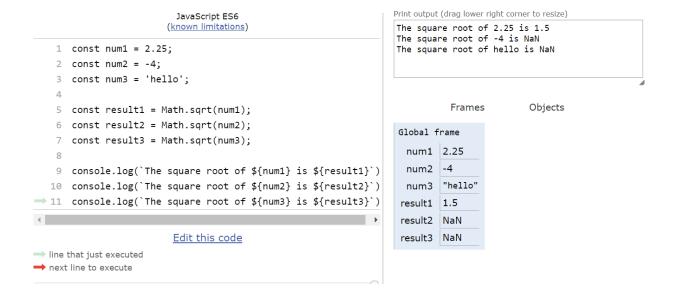


#### Example-3 Square Root of Different Data Types

```
const num1 = 2.25;
const num2 = -4;
const result1 = Math.sqrt(num1);
const result2 = Math.sqrt(num2);
const result3 = Math.sqrt(num3);

console.log(`The square root of ${num1} is ${result1}`);
console.log(`The square root of ${num2} is ${result2}`);
console.log(`The square root of ${num3} is ${result3}`);
/*Output:
The square root of 2.25 is 1.5
The square root of -4 is NaN
The square root of hello is NaN
*/
```

Find-The Square Root: 2



- 0 sqrt is 0
- -1 or value sqrt is NaN
- string sqrt is NaN

Find-The Square Root: 3