

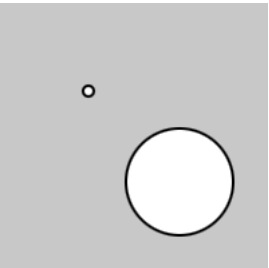
Reference > sqrt()

# sqrt()

Calculates the square root of a number.

A number's square root can be multiplied by itself to produce the original number. For example, `sqrt(9)` returns 3 because  $3 \times 3 = 9$ . `sqrt()` always returns a positive value. `sqrt()` doesn't work with negative arguments such as `sqrt(-9)`.

## Examples



```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Top-left.
  let d = sqrt(16);
  circle(33, 33, d);

  // Bottom-right.
  d = sqrt(1600);
  circle(67, 67, d);

  describe('Two white circles. The circle at the top-left is
small. The circle at the bottom-right is ten times larger.');
```



```
function setup() {
  createCanvas(100, 100);

  background(200);

  describe('A series of black dots that get higher slowly from
left to right.');
```

```
function draw() {
  // Invert the y-axis.
  scale(1, -1);
  translate(0, -100);

  // Calculate the coordinates.
  let x = frameCount;
  let y = 5 * sqrt(x);

  // Draw the point.
  point(x, y);
}
```

## Syntax

```
sqrt(n)
```

## Parameters

n      Number: non-negative number to square root.

## Returns

Number: square root of number.

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## Related References

**abs**  
Calculates the absolute value of a number.

**ceil**  
Calculates the closest integer value that is greater than or equal to a number.

**constrain**  
Constrains a number between a minimum and maximum value.

**dist**  
Calculates the distance between two points.

p5.js

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