

# acos()

Calculates the arc cosine of a number.

`acos()` is the inverse of `cos()`. It expects arguments in the range -1 to 1. By default, `acos()` returns values in the range 0 to  $\pi$  (about 3.14). If the `angleMode()` is `DEGREES`, then values are returned in the range 0 to 180.

## Examples

3.142  
-1  
3.142



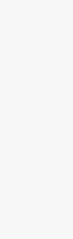
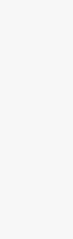
```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Calculate cos() and acos() values.
  let a = PI;
  let c = cos(a);
  let ac = acos(c);

  // Display the values.
  text(` ${round(a, 3)} `, 35, 25);
  text(` ${round(c, 3)} `, 35, 50);
  text(` ${round(ac, 3)} `, 35, 75);

  describe('The numbers 3.142, -1, and 3.142 written on
separate rows.');
}
```



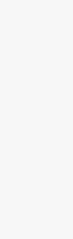
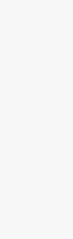
```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Calculate cos() and acos() values.
  let a = PI + QUARTER_PI;
  let c = cos(a);
  let ac = acos(c);

  // Display the values.
  text(` ${round(a, 3)} `, 35, 25);
  text(` ${round(c, 3)} `, 35, 50);
  text(` ${round(ac, 3)} `, 35, 75);

  describe('The numbers 3.927, -0.707, and 2.356 written on
separate rows.');
}
```



## Syntax

`acos(value)`



## Parameters

`value` Number: value whose arc cosine is to be returned.

## Returns

Number: arc cosine of the given value.

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## Related References

### acos

Calculates the arc cosine of a number.

### angleMode

Changes the unit system used to measure angles.

### asin

Calculates the arc sine of a number.

### atan

Calculates the arc tangent of a number.

