

atan()

Calculates the arc tangent of a number.

`atan()` is the inverse of `tan()`. It expects input values in the range of $-\infty$ to ∞ . By default, `atan()` returns values in the range $-\pi/2$ (about -1.57) to $\pi/2$ (about 1.57). If the `angleMode()` is `DEGREES` then values are returned in the range -90 to 90 .

Examples

1.047
1.732
1.047



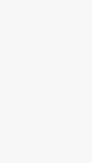
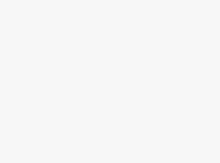
```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Calculate tan() and atan() values.
  let a = PI / 3;
  let t = tan(a);
  let at = atan(t);

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

  describe('The numbers 1.047, 1.732, and 1.047 written on
  separate rows.');
}
```



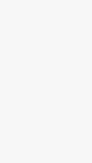
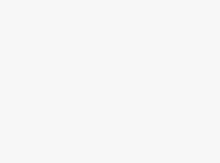
```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Calculate tan() and atan() values.
  let a = PI + PI / 3;
  let t = tan(a);
  let at = atan(t);

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

  describe('The numbers 4.189, 1.732, and 1.047 written on
  separate rows.');
}
```



Syntax

`atan(value)`



Parameters

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

Returns

Number: arc tangent of the given value.

This page is generated from the comments in `src/math/trigonometry.js`. Please feel free to edit it and submit a pull request!

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.

