

JAVASCRIPT - MATH ATAN2 METHOD

http://www.tutorialspoint.com/javascript/math_atan2.htm

Copyright © tutorialspoint.com

Description

This method returns the arctangent of the quotient of its arguments. The atan2 method returns a numeric value between -pi and pi representing the angle theta of an x,y point.

Syntax

Its syntax is as follows –

```
Math.atan2( x, y ) ;
```

Parameter Details

x and y – Numbers.

Return Value

Returns the arctangent in radians of a number.

```
Math.atan2( ±0, -0 ) returns ±PI.  
Math.atan2( ±0, +0 ) returns ±0.  
Math.atan2( ±0, -x ) returns ±PI for x < 0.  
Math.atan2( ±0, x ) returns ±0 for x > 0.  
Math.atan2( y, ±0 ) returns -PI/2 for y > 0.  
Math.atan2( ±y, -Infinity ) returns ±PI for finite y > 0.  
Math.atan2( ±y, +Infinity ) returns ±0 for finite y > 0.  
Math.atan2( ±Infinity, +x ) returns ±PI/2 for finite x.  
Math.atan2( ±Infinity, -Infinity ) returns ±3*PI/4.  
Math.atan2( ±Infinity, +Infinity ) returns ±PI/4.
```

Example

Try the following example program.

```
<html>  
  
  <head>  
    <title>JavaScript Math atan2() Method</title>  
  </head>  
  
  <body>  
  
    <script type="text/javascript">  
      var value = Math.atan2(90,15);  
      document.write("First Test Value : " + value );  
  
      var value = Math.atan2(15,90);  
      document.write("<br />Second Test Value : " + value );  
  
      var value = Math.atan2(0, -0);  
      document.write("<br />Third Test Value : " + value );  
  
      var value = Math.atan2(+Infinity, -Infinity);  
      document.write("<br />Fourth Test Value : " + value );  
    </script>  
  
  </body>  
</html>
```

Output

```
First Test Value : 1.4056476493802699
Second Test Value : 0.16514867741462683
Third Test Value : 3.141592653589793
Fourth Test Value : 2.356194490192345
Loading [Mathjax]/jax/output/HTML-CSS/fonts/TeX/fontdata.js
```