**arctg**

*Function of calculating arc tangent of real or complex number.*

**Syntax:**

*y* **= arctg***(x);*

**Arguments:**

*x* – input value.

**Description:**

*arctg(x)* – function of calculating arc tangent of real or complex number.

The input value can be both real and complex number.

The input real value is restricted by condition: -1<*x*<1.

The input value can be assigned either as a preliminarily determined variable, or as a constant number.

A complex number shall be assigned by the expression *a*+*b*i, where *a* and *b* are real and virtual number parts, accordingly.

**Result:**

*y* – arc tangent of input value *x*.

**Example 1:**

*Arc tangent* *of real number*

|  |  |
| --- | --- |
|  | **const** x = 5;  y = **arctg**(x); |

As a result, variable *y* will be assigned a value 1.3734008.

**Example 2:**

*Arc tangent* *of complex number*

|  |  |
| --- | --- |
|  | y = **arctg**(3+4i); |

As a result, variable *y* will be assigned a value 1.448307+0.15899719i.