**root**

*Function of calculating root of arbitrary order of real or complex number.*

**Syntax:**

*z* **= root**(*y*, *x*)*;*

**Arguments:**

*x* – input value,

*y* – order of root.

**Description:**

*root(x)* – function of calculating root of arbitrary order of real or complex number.

The input value shall be positive for the real numbers at the even orders.

The order shall be an integer.

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

**Result:**

*z* – root of input value *x* of order *y*.

**Example 1:**

*Root of arbitrary order of real number.*

|  |  |
| --- | --- |
|  | **const** y = 3;  **const** x = 5;  z = **root**(y, x); |

As a result, variable *z* shall be assigned value 1.7099759.

**Example 2:**

*Root of arbitrary order of complex number.*

|  |  |
| --- | --- |
|  | **const** y = 3;  **const** x = 3+4i;  z = **root**(y, x); |

As a result, variable *z* shall be assigned value 1.6289371+0.5201745i.