**abs**

*Function of getting module of real or complex number or vector.*

**Syntax:**

*Y* **= abs***(X);*

**Arguments:**

*Х* – input value or input array comprising vector elements.

**Description:**

*abs(X)* – function of getting module of real or complex number or vector.

The input value or array *X* can be assigned:

* as variable of number type or array of numbers type determined earlier:

*Y* = **abs**(*X*);

* as array consisting of variables determined earlier:

*Y* = **abs**([*x1,x2,x3,x4*]);

* as constant array:

*Y* = **abs**([1,2,3]);

* as constant real number:

*Y* = **abs**(-3);

* as constant complex number:

*Y* = **abs**(3+4i);

The input values can be both real and complex numbers.

**Result:**

*Y* – module of input or output array, which elements correspond to the modules of input array elements.

**Example 1:**

*Module of real number*

|  |  |
| --- | --- |
|  | Y = **abs**(-3); |

As a result variable *Y* will be assigned value +3.

**Example 2:**

*Module of complex number*

|  |  |
| --- | --- |
|  | Y = **abs**(3+4i); |

As a result variable *Y* will be assigned value +5.

**Example 3:**

*Module of real array*

|  |  |
| --- | --- |
|  | **const** X = [-2, 2, -1, 3, -4];  Y = **abs**(x); |

As a result variable *Y* will be assigned array value [2, 2, 1, 3, 4].