numpy.log2

numpy.log2(*x*[, *out*]) = <ufunc 'log2'>

Base-2 logarithm of *x*.

Parameters:	**x** *: array_like*	Input values.
Returns:	**y** *: ndarray*	Base-2 logarithm of *x*.

See also:
log (numpy.log.html#numpy.log), log10 (numpy.log10.html#numpy.log10), log1p (numpy.log1p.html#numpy.log1p), emath.log2

Notes

New in version 1.3.0.

Logarithm is a multivalued function: for each *x* there is an infinite number of *z* such that *2**z = x*. The convention is to return the *z* whose imaginary part lies in *[-pi, pi]*.

For real-valued input data types, log2 always returns real output. For each value that cannot be expressed as a real number or infinity, it yields `nan` and sets the *invalid* floating point error flag.

For complex-valued input, log2 is a complex analytical function that has a branch cut *[-inf, 0]* and is continuous from above on it. log2 handles the floating-point negative zero as an infinitesimal negative number, conforming to the C99 standard.

Examples

Previous topic
numpy.log10 (numpy.log10.html)

Next topic
numpy.log1p (numpy.log1p.html)

```
>>> x = np.array([0, 1, 2, 2**4])
>>> np.log2(x)
array([-Inf,   0.,   1.,   4.])
```

```
>>> xi = np.array([0+1.j, 1, 2+0.j, 4.j])
>>> np.log2(xi)
array([ 0.+2.26618007j,  0.+0.j        ,  1.+0.j        ,  2.+2.26618007j])
```