

## tf.sign

```
sign(  
    x,  
    name=None  
)
```

Defined in [tensorflow/python/ops/math\\_ops.py](#).

See the guide: [Math > Basic Math Functions](#)

Returns an element-wise indication of the sign of a number.

$y = \text{sign}(x) = -1$  if  $x < 0$ ;  $0$  if  $x == 0$  or `tf.is_nan(x)`;  $1$  if  $x > 0$ .

Zero is returned for NaN inputs.

For complex numbers,  $y = \text{sign}(x) = x / |x|$  if  $x \neq 0$ , otherwise  $y = 0$ .

## Args:

- $x$ : A `Tensor` or `SparseTensor`. Must be one of the following types: `half`, `float32`, `float64`, `int32`, `int64`, `complex64`, `complex128`.
- `name`: A name for the operation (optional).

## Returns:

A `Tensor` or `SparseTensor`, respectively. Has the same type as  $x$ .

## numpy compatibility

Equivalent to `numpy.sign` except for the behavior for input values of NaN.

---

Except as otherwise noted, the content of this page is licensed under the [Creative Commons Attribution 3.0 License](#), and code samples are licensed under the [Apache 2.0 License](#). For details, see our [Site Policies](#). Java is a registered trademark of Oracle and/or its affiliates.

Last updated November 2, 2017.

## Stay Connected

[Blog](#)

[GitHub](#)

[Twitter](#)

## Support

[Issue Tracker](#)

[Release Notes](#)

[Stack Overflow](#)

**English**

[Terms](#) | [Privacy](#)