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**Order of magnitude of number**

version 1.1.0.0 (1.24 KB) by Ivar Eskerud Smith

Returns the order of magnitude of one or more numbers.

★★★★★ (7)

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Updated 18 Jun 2012

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Returns the order of magnitude of one or more numbers. Works on arrays. You can also specify the number base.

%Ex:

`order(1.2e-5) %returns -5``order(1) = 0``order(1.12344e8) %returns 8`

%Specify base 2:

`order(1.2*2^5,2) %returns 5`**Cite As**

Ivar Eskerud Smith (2022). Order of magnitude of number (<https://www.mathworks.com/matlabcentral/fileexchange/28559-order-of-magnitude-of-number>), MATLAB Central File Exchange. Retrieved April 16, 2022.

Requires

MATLAB

MATLAB Release Compatibility

Created with R2012a

Compatible with any release

Platform Compatibility☒ Windows ☒ macOS ☒ Linux**Categories**

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Acknowledgements

Inspired by: logb**Inspired:** SEROUND: Round value and standard error

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order(val, base)

```
function n = order( val, base )  
%Order of magnitude of number for :  
%order(0.002) will return -3., orde  
%Author Ivar Smith  
  
if nargin < 2  
    base = 10;  
end  
n = floor(log(abs(val))./log(base))
```

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