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Windows PowerShell
PS C:\Users\Molly> python3
Python 3.11.5 (tags/v3.11.5:cce6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> x = [1, 2, 3]
>>> 3*x
[1, 2, 3, 1, 2, 3, 1, 2, 3]
>>> import numpy as np
>>> y = np.array([1, 2, 3])
>>> 3*y
array([3, 6, 9])
>>> print('this is 3y',3*y)
this is 3y [3 6 9]
>>> import matplotlib.pyplot as plt
>>> x = np.linspace(1, 10, 10)
>>> x
array([ 1.,  2.,  3.,  4.,  5.,  6.,  7.,  8.,  9., 10.])
>>> y = np.arange(1, 10, 1)
>>> y = np.arange(2,20,2)
>>> x[0]
1.0
>>> z = [1,2,3]
>>> x[z]
array([2.,  3.,  4.])
>>> z = [0,1,2]
>>> x[z]
array([1.,  2.,  3.])
>>> print('The first three entries of x are:',x[z])
The first three entries of x are: [1. 2. 3.]
>>> w = 10 ** (-np.linspace(1, 10, 10))
>>> x = int(w)
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: only length-1 arrays can be converted to Python scalars
>>> x = int(np.linspace(1,10,10))
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: only length-1 arrays can be converted to Python scalars
>>> x = np.arange(1,10,1)
>>> x
array([1, 2, 3, 4, 5, 6, 7, 8, 9])
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>>> x[0]
1.0
>>> z = [1,2,3]
>>> x[z]
array([2.,  3.,  4.])
>>> z = [0,1,2]
>>> x[z]
array([1.,  2.,  3.])
>>> print('The first three entries of x are:',x[z])
The first three entries of x are: [1. 2. 3.]
>>> w = 10 ** (-np.linspace(1, 10, 10))
>>> x = int(x)
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: only length-1 arrays can be converted to Python scalars
>>> x = int(np.linspace(1,10,10))
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: only length-1 arrays can be converted to Python scalars
>>> x = np.arange(1,10,1)
>>> x
array([1, 2, 3, 4, 5, 6, 7, 8, 9])
>>> y = np.arange(2,22,2)
>>> y
array([ 2,  4,  6,  8, 10, 12, 14, 16, 18, 20])
>>> x = np.arange(1, 11, 1)
>>> plt.plot(x,w)
[<matplotlib.lines.Line2D object at 0x000001E325717E90>]
>>> plt.semilogy(x,w)
[<matplotlib.lines.Line2D object at 0x000001E3271FCC50>]
>>> plt.semilogy(x,w)
[<matplotlib.lines.Line2D object at 0x000001E3271FACD0>]
>>> plt.show()
>>> w = 10**(-np.linspace(1,10,10))
>>> x = np.arange(1,11,1)
>>> plt.semilogy(x,w)
[<matplotlib.lines.Line2D object at 0x000001E3275DD450>]
>>> plt.show()
>>>
```

