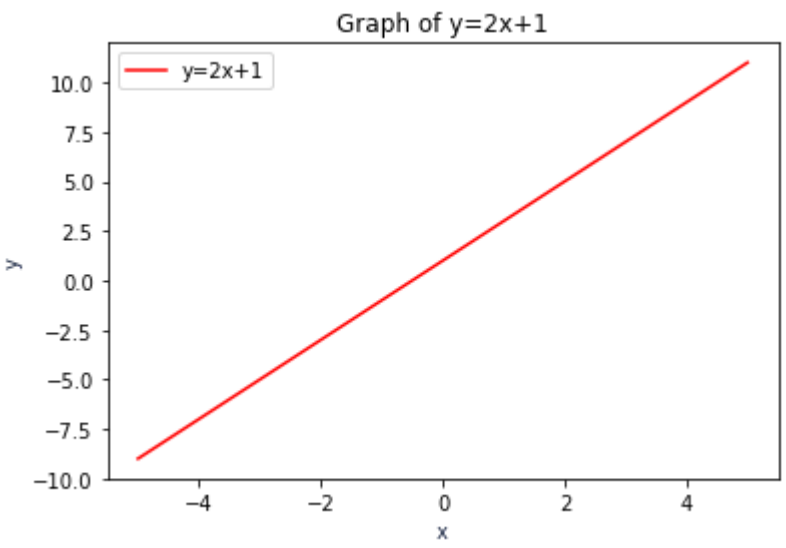
```
## ESERCITAZIONE LAB


import matplotlib.pyplot as plt
import numpy as np
x = np.linspace(-?,?,100)
y = ???????
plt.plot(x, y, '-r', label='y=2x+1')
plt.title('Graph of y=2x+1')
plt.xlabel('x', color='#1C2843' )
plt.ylabel('y', color='#1C2843')
plt.legend(loc='upper left')
#plt.grid()
plt.show()
```




```
# 100 linearly spaced numbers
x = np.linspace(?,?,?)

# the function, which is y = ??? here
y = ???


# setting the axes at the centre
fig = plt.figure()
ax = fig.add_subplot(1, 1, 1)
ax.spines['left'].set_position('center')
ax.spines['bottom'].set_position('center')
ax.spines['right'].set_color('none')
ax.spines['top'].set_color('none')
```

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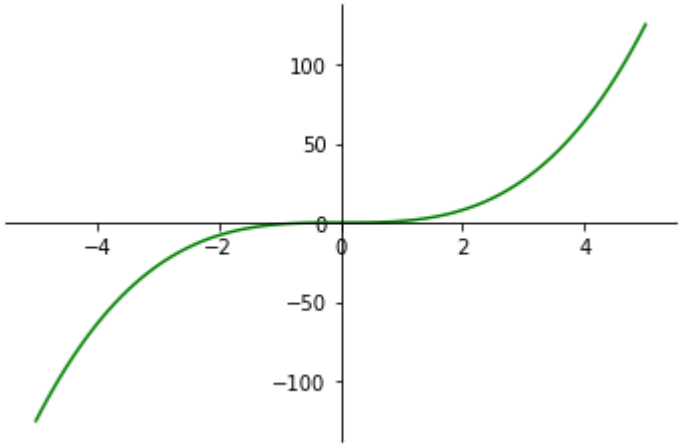
ax.xaxis.set_ticks_position('bottom')
ax.yaxis.set_ticks_position('left')


# plot the function
plt.plot(x,y, '?')
```

```
[<matplotlib.lines.Line2D at 0x7fb5e46f8208>]
```



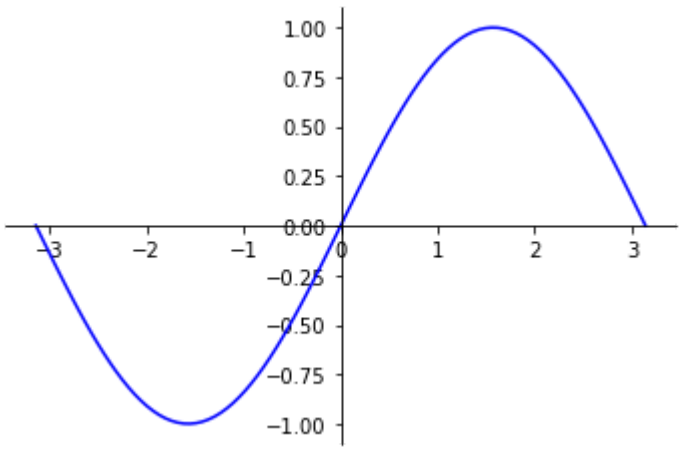

```
# 100 linearly spaced numbers
x = np.linspace(?,?,?)

# the function, which is y = sin(x) here
y = np.??(x)

# setting the axes at the centre
fig = plt.figure()
ax = fig.add_subplot(1, 1, 1)
ax.spines['left'].set_position('center')
ax.spines['bottom'].set_position('center')
ax.spines['right'].set_color('none')
ax.spines['top'].set_color('none')
ax.xaxis.set_ticks_position('bottom')
ax.yaxis.set_ticks_position('left')

# plot the function
plt.plot(x,y, 'b')

# show the plot
plt.show()
```




```
import matplotlib.pyplot as plt
import numpy as np

# 100 linearly spaced numbers
x = np.linspace(?,?,100)

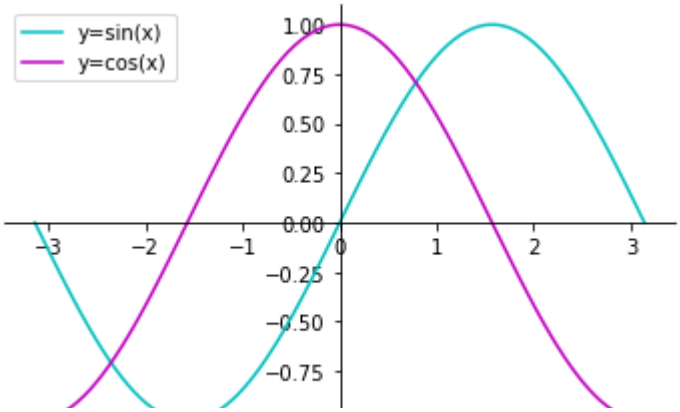
# the functions, which are y = ? and z = ? here
y = np.?(x)
z = np.?(x)

# setting the axes at the centre
fig = plt.figure()
ax = fig.add_subplot(1, 1, 1)
ax.spines['left'].set_position('center')
ax.spines['bottom'].set_position('center')
ax.spines['right'].set_color('none')
ax.spines['top'].set_color('none')
ax.xaxis.set_ticks_position('bottom')
ax.yaxis.set_ticks_position('left')

# plot the functions
plt.plot(x,y, 'c', label='y=sin(x)')
plt.plot(x,z, 'm', label='y=cos(x)')

plt.legend(loc='upper left')

# show the plot
plt.show()
```




```
np.??
```

```
3.141592653589793
```

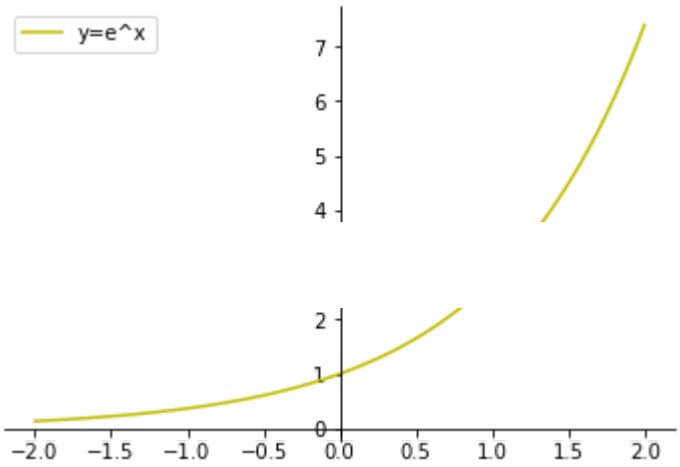
```
# 100 linearly spaced numbers
x = np.linspace(?,?,?)

# the function, which is y = e^x here
y = ????

# setting the axes at the centre
fig = plt.figure()
ax = fig.add_subplot(1, 1, 1)
ax.spines['left'].set_position('center')
ax.spines['bottom'].set_position('zero')
ax.spines['right'].set_color('none')
ax.spines['top'].set_color('none')
ax.xaxis.set_ticks_position('bottom')
ax.yaxis.set_ticks_position('left')

# plot the function
plt.plot(x,y, 'y', label='y=e^x')
plt.legend(loc='upper left')

# show the plot
plt.show()
```


y=e^x
7
6
5
4
2
1
0
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0