[3]
```
import numpy as np
from scipy.special import erf
import matplotlib.pyplot as plt
```

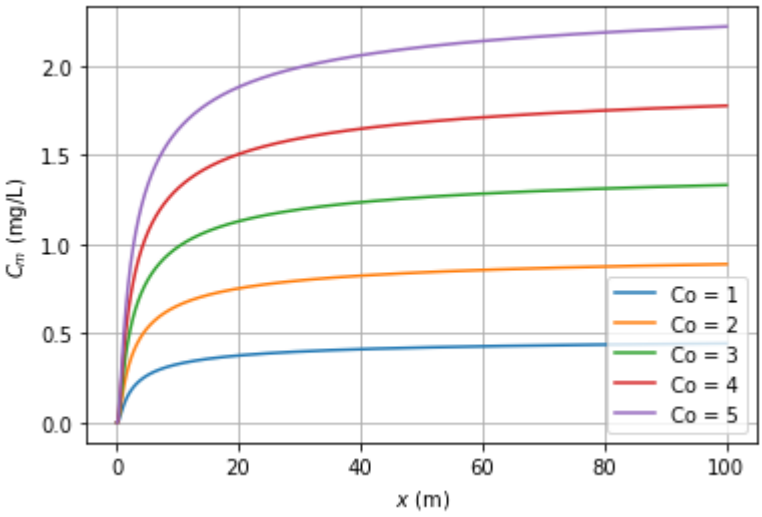
[5]
```
# Python as a calculator

a, b, c = 2, 50 , 100  # define variables

d = a*b**2+c*np.sqrt(a)-np.pi  # operate

d #get result SHIFT+ENTER or click Run
```

```
5138.27976358372
```

[5]
```
#Defining your own function

def eq1(x, y, co, v, Dm):
    return co/2*(1-erf(y/(np.sqrt(4*Dm*(x/v)))))
```

[9]
```
# using your own function
x = np.linspace(0.1,100,10000)
y = 2
v = 1
Dm = 1
label = ["Co = 1", "Co = 2", "Co = 3", "Co = 4", "Co = 5"]

for co in [1, 2, 3, 4, 5]:
    cm = eq1(x,y,co, v, Dm)
    plt.plot(x, cm)
    plt.legend(label)
    plt.ylabel(r'$C_m$ (mg/L)'), plt.xlabel(r'$x$ (m)')
    plt.grid(), plt.savefig("fig_L1.pdf")

print(cm[5])
```

```
0.0006504346064969968
```


2.0
1.5
1.0
0.5
0.0
$C_m$ (mg/L)
0
20
40
60
80
100
$x$ (m)
Co = 1
Co = 2
Co = 3
Co = 4
Co = 5

[ ]