import matplotlib.pyplot as plt

# define constants of function

c1=4

c2=5

points=[[0,0],[4,0],[0,3],[2,1]]

z=[]

for i in points:

value=c1\*i[0]+c2\*i[1]

z.append(value)

print("value at ",i,"is : ",value)

Max=points[z.index(max(z))]

print("optimal point is :",Max)

# x and y are define

x = [i for i in range(0,10)]

y = [(6-2\*i) for i in x]

y1= [(9-2\*i) for i in x]

# plot x and y

plt.plot(x, y)

plt.plot(x, y1)

# to make grid in graph

plt.grid(True)

# to limit axis of x and y

plt.xlim(0,12)

plt.ylim(-26,13)

# to stlye line in figure

plt.plot(x,y,ls="dotted",marker="s",c="b",lw="2")

plt.plot(x,y1,ls="dotted",marker=".",c="r",lw="2")

# to label axis

plt.xlabel('x - axis')

plt.ylabel('y - axis')

# to label graph

plt.title('My first graph!')

# to show graph

plt.show()