

average of y: 23.0

```
#random-oor too ogohod hereglegdene
import random
#arr--iin niilberiin olood urt huwaaj urtiig ni olno
def average(arr):
    return sum(arr) / len(arr)
#arr-iig osohoor erembeleed urt ni tegsh bol goliin 2 elementiin niilberiin dundajiig butsaan
#songoi bol goliin elementiig butsaana
def median(arr1):
    arr1 = sorted(arr)
    n = len(arr1)
    if n % 2:
        return int(arr1[n // 2] + arr1[n // 2]) // 2
    else:
        return int(arr1[n // 2])
#endees program ehelne
#garaas x, y 2 buhel too awna
x = int(input())
#y = int(input())
#arr-iig list eer uusgene
arr = list()
#garaas oruulsan x-iin urtaar arr-d randomoor 0-ees 10-iin hoorond buhel too olgono

for i in range(x):
    arr.insert(i, random.randint(0, 10))

print(arr)
#garaas neg too awna
temp = int(input())
#tooluuraa noillono
cnt = 0
#arr listed garaas oruulsan too taaraldah ym bol tooluuriig negeer nemne
for i in arr:
    if i == temp:
        cnt += 1

print(cnt)

5
6
[5, 6, 3, 10, 4]
2
0
```

▼ Lab2

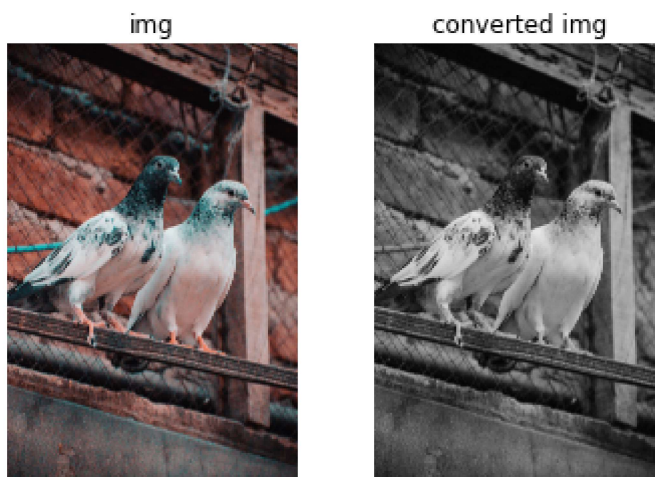
```
import PIL
import matplotlib.pyplot as plt
```

```
img = Image.open("image1.jpg")  
img_converted = img.convert("1")
```

```
plt.subplot(1, 2, 1)  
plt.imshow(img)  
plt.title("img")  
plt.axis("off")
```

```
plt.subplot(1, 2, 2)  
plt.imshow(img_converted)  
plt.title("converted img")  
plt.axis("off")
```

(-0.5, 3999.5, 5999.5, -0.5)



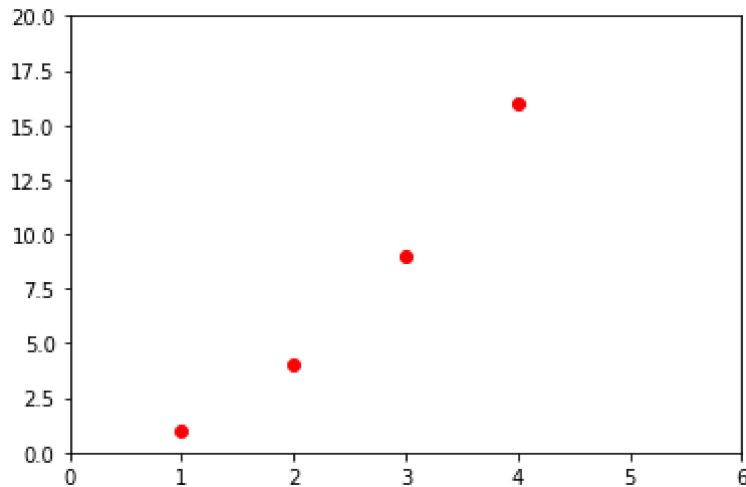
```
with Image.open('image1.jpg') as img:  
    try:  
        img.save('copy_image.jpg')  
    except IOError:  
        print('cannot convert')
```

```
plt.plot([1, 2, 3, 4], [1, 4, 9, 16])
```

```
[<matplotlib.lines.Line2D at 0x7fd931a8d510>]
```



```
import matplotlib.pyplot as plt
plt.plot([1,2,3,4], [1,4,9,16], 'ro')
plt.axis([0, 6, 0, 20])
plt.show()
```



```
from PIL import Image
```

```
# Thumbnail үүсгэж буй код
im = Image.open('image1.jpg')
im.thumbnail((128, 128))
im.save('thumbnail.jpg')
```

```
im = Image.open('image1.jpg').convert('L')
im.save('ByPython.jpg')
```

```
im = Image.open('image1.jpg')
box = (1800, 1500, 2500, 2000)
region = im.crop(box)
region = region.transpose(Image.ROTATE_180)
im.paste(region, box)
im.save('crop_rotate.jpg')
```

Үргэлжлэл

```
import numpy as np
import matplotlib.pyplot as plt
from PIL import Image, ImageOps
```