In [40]:

```
N = 3                           #NUMBER OF POINTS

if N == 0:
    print("Number of points cannot be zero!")
else:
    temp = 0
    for i in range(N):
        for j in range(N):          #PERFORMING ITERATION
            if i >= j:
                temp += i - j
            else:
                temp += j - i

    avg_distance = temp / (N*N)     #CALCULATING AVERAGE
    print("Average distance is: ", avg_distance)            #PRINTING
```

```
Average distance is:  0.8888888888888888
```

In [41]:

```
N = 10                          #NUMBER OF POINTS

if N == 0:
    print("Number of points cannot be zero!")
else:
    temp = 0
    for i in range(N):
        for j in range(N):          #PERFORMING ITERATION
            if i >= j:
                temp += i - j
            else:
                temp += j - i

    avg_distance = temp / (N*N)     #CALCULATING AVERAGE
    print("Average distance is: ", avg_distance)            #PRINTING
```

```
Average distance is:  3.3
```

In [42]:

```
N = 0                           #NUMBER OF POINTS

if N == 0:
    print("Number of points cannot be zero!")
else:
    temp = 0
    for i in range(N):
        for j in range(N):          #PERFORMING ITERATION
            if i >= j:
                temp += i - j
            else:
                temp += j - i

    avg_distance = temp / (N*N)     #CALCULATING AVERAGE
    print("Average distance is: ", avg_distance)            #PRINTING
```

```
Number of points cannot be zero!
```

In [43]:

```
N = 20                          #NUMBER OF POINTS

if N == 0:
    print("Number of points cannot be zero!")
else:
    temp = 0
    for i in range(N):
        for j in range(N):          #PERFORMING ITERATION
            if i >= j:
                temp += i - j
            else:
                temp += j - i

    avg_distance = temp / (N*N)     #CALCULATING AVERAGE
    print("Average distance is: ", avg_distance)            #PRINTING
```

```
Average distance is:  6.65
```

In [ ]:

```

```