

```
arr = [3,2,6,7,9,15,10,13,11,19]
d = []
for i in range(len(arr)-1):
    d.append(arr[i+1]-arr[i])
d
```

→ [-1, 4, 1, 2, 6, -5, 3, -2, 8]

```
a = d[0:8]
print(a)
b = d[1:9]
print(b)
```

→ [-1, 4, 1, 2, 6, -5, 3, -2]
[4, 1, 2, 6, -5, 3, -2, 8]

```
#mean of both array
import pandas as pd
import numpy as np
mean_a = np.mean(a)
mean_b = np.mean(b)
print(mean_a)
print(mean_b)
```

→ 1.0
2.125

```
#finding variance
var_a = np.var(a)
var_b = np.var(b)
print(var_a)
print(var_b)
```

→ 11.0
15.359375

```
cov1 = np.cov(a,b)
cov_val = cov1[0,1]
print(cov_val)
```

→ -10.0

```
ph = cov_val/(var_a)
print(ph)
```

→ -0.9090909090909091

```
arr.append(arr[len(arr)-1]+ph)
arr
```

→ [3,
2,
6,
7,
9,
15,
10,
13,
11,
19,
18.09090909090909,
17.18181818181818,
16.27272727272727,
15.363636363636362]

Start coding or [generate](#) with AI.

