

```
nup=0 # nup counts no of up steps
ndown=0 # ndown counts no of down steps
not0=0 # counts no of non zero states
```

```
for i in range(1,N):
    if qdata[i]>0:
        not0=not0+1
        if qdata[i]>qdata[i-1]:
            nup=nup+1
        elif qdata[i]<qdata[i-1]:
            ndown=ndown+1
# if statements complete
print(not0, "non zero states",nup,"up steps", ndown,"down steps")
```

```
p1=nup/not0
p2=ndown/not0
print(p1,p2)
```