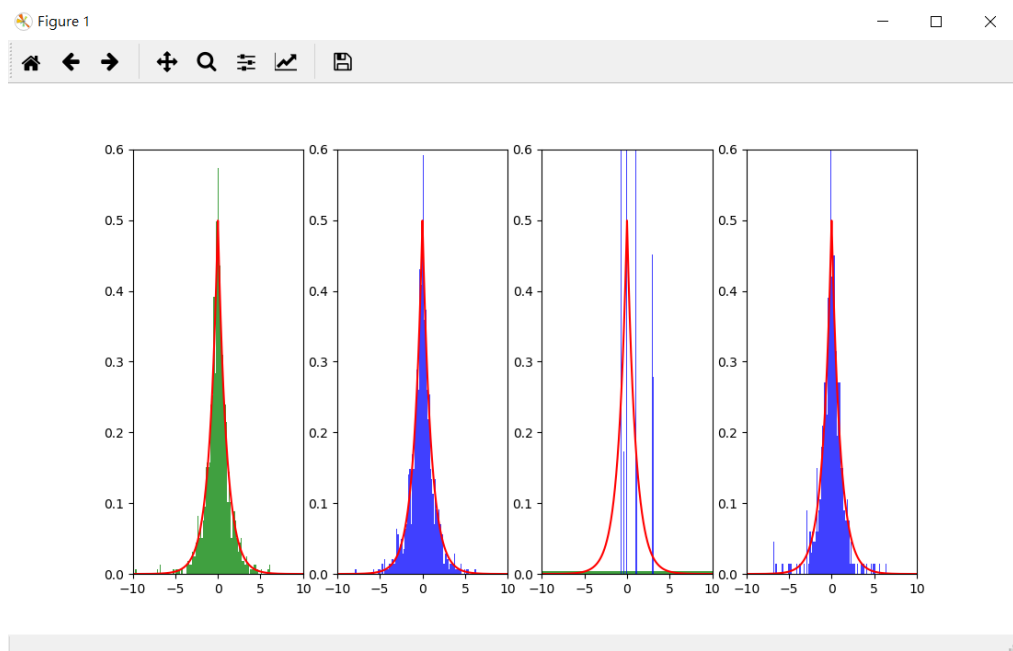


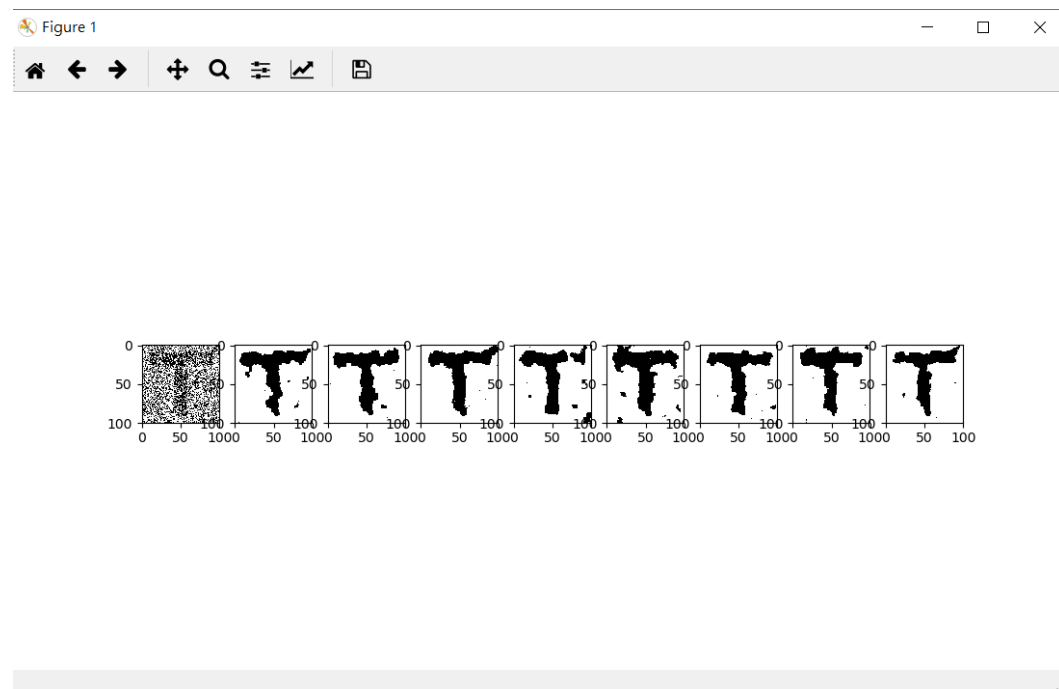
P1.



P2.

```
(base) D:\CDS\STATISTICS\final>python p2.py  
a: 0.0008910626185663535  
b: 0.0049562566962852335  
c: 8.773213097310742e+36
```

P3.



P4.

```
(base) D:\CDS\STATISTICS\final>python p4.py
prob of success(old way): 5.124038717730862e-09
turns: 363.8
prob of success(new machine): 7.0565169115195106e-09
turns: 389.608
```