

Exp 1

Aim-To study signal to interference ratio for average and worst case in mobile communication.

Code :

```
clc;
clear all;
close all;
#calculation of N and Q
i =[ 1 1 2 1]
j =[1 2 2 3]
N= i. ^2+i. * j+j . ^2
Q = sqrt(3*N)

for n=2:1:4
avg_SIdB = 10 * (log10(1./6*(Q. ^-n)))
worst_SIdB = 10*log10(0.5./((Q.^-n+(Q-1).^-n+(Q+1).^-n)))
plot(N, avg_SIdB, N , worst_SIdB);
xlabel('cluster Size');
ylabel('S/I ratio');
hold on;
grid on;
text(8.1,7,'n=2');
text(8.1,14,'n=3');
text(8.1,21,'n=4');
endfor
```