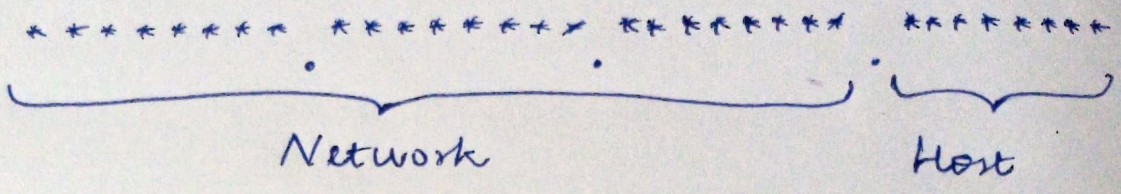
Q5) Given IP address : 192.168.1.0/24

Need : 4 subnets

/24 → class C




No. of bits needed to represent subnets } : $2^x = 4$

$x = 2$

192.168.1.0/26

Rest of the host bits = 6

$2^6 = 64$

| Subnets | Network address | Usable IP addresses | Broadcast address |
|---|---|---|---|
| 1 | 192.168.1.0/26 | 1.1 – 1.62 | 192.168.1.63 |
| 2 | 192.168.1.64/26 | 1.65 - 1.126 | 192.168.1.127 |
| 3 | 192.168.1.128/26 | 1.129 - 1.190 | 192.168.1.191 |
| 4 | 192.168.1.192/26 | 1.93 – 1.254 | 192.168.1.255 |

## Ranges

1 : 192.168.1.1 – 192.168.1.62

2 : 192.168.1.65 – 192.168.1.126

3 : 192.168.1.129 - 192.168.1.190

4 : 192.168.1.193 - 192.168.1.254