1. Which bits are the network component and which bits are the node component given the following:

IPv4

192.168.38.5

Subnet Mask

255.255.128.0

IPv4

196

1 3 6 12 24 48 96 192

11000000

168

1 2 5 10 21 42 84 168

10101000

38

1 2 4 9 19 38

00100110

5

1 2 5

00000101

IPv4

192.168.38.5

11000000.10101000.00100110.00000101

Subnet Mask

255

1 3 7 15 31 63 127 255

11111111

255

1 3 7 15 31 63 127 255

11111111

128

1 2 4 8 16 32 64 128

10000000

0

00000000

Subnet Mask

255.255.128.0

11111111.11111111.10000000.00000000

11111111.11111111.10000000.00000000

+ 11000000.10101000.00100110.00000101

11000000.10101000.00000000.0000000

Network component bits of the IP address are:

11000000.10101000.0

node component of the IP address is:

0000000.0000000

2.Convert your IPv6 to binary. Mine:

fe80:0:6890:7120:782b:769d

1111111010000000.0000000000000000. 111000100100000. 110100010010000. 111100000101011. 111011010011101