

Practical 14

7 Calculate subnet mask of two networks Consider 192.168.1.0.

To create 2 subnetworks we have to borrow 1 bit.

1 0000000

$2^1 = 2 - 2$ subnetworks $2^7 - 2 = 128 - 2 = 126$ host ID.

Subnet mask = 11111111 11111111 11111111 10000000

$2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0$ $2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0$ $2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0$

$128 + 64 + 32 + 16 + 8 + 4 + 1$ $128 + 64 + 32 + 16 + 8 + 4 + 1$ $128 + 64 + 32 + 16 + 8 + 4 + 1$

255

255

255

128

New subnet mask : 255 . 255 . 255 . 128.