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Soal Latihan subneting

Tentukan : a. Berapa jumlah subnet yang dihasilkan
            b. Berapa jumlah host yang valid untuk seti
               subnet
            c. Block subnet
            d. Alamat host dan broadcast yang valid
Untuk IP Address berikut ini :
1.) 192.168.10.20 /24
2.) 192.168.40.100 /27
3.) 172.16.77.88 /18

1. 192.168.10.20 /24

11111111 . 11111111 . 11111111 . 00000000

255   .   255 .   255 .   0

   $x = 0$ $y = 8$

a. subnet : $2^x = 2^0 = 1$
b. jumlah host yang valid : $2^y - 2 = 2^8 - 2 = 256 - 2 = 254$
c. Block subnet : $256 - 0 = 256$
d. subnet : 192.168.10.0
   host pertama : 192.168.10.1
   host akhir : 192.168.10.254
   Broadcast : 192.168.10.255

2. 192.168.40.100/27

11111111 . 11111111 . 11111111 . 11100000

255 . 255 . 255 . 224

a. jumlah subnet = $2^x = 2^3 = 8$

b. " host yg valid = $2^x - 2 = 2^5 - 2 = 32 - 2 = 30$

c. blok subnet = $256 - 224 = 32$

(32, 64, 06, 128, 160, 192, 224) 8 blok

d. subnet	0	32	64	96	128	160	192	224
host pertama	1	33	65	97	129	161	193	235
" akhir	30	62	94	126	158	190	224	254
Broadcast	31	62	95	927	159	191	223	255

3. 172.16.73.88/18

11111111 . 11111111 . 11000000 . 00000000

255 . 255 . 192 . 0

a. Jumlah subnet = $2^x = 2^2 = 4$

b. " host yg valid = $2^x - 2 = 2^{14} - 2 = 16.384 - 2 = 16.382$

c. Blok subnet = $256 - 192 = 64$

d. subnet	Host pertama	Host akhir	Broadcast
172.16.0.0	172.16.0.1	172.16.63.254	172.16.63.255
172.16.64.0	172.16.64.1	172.16.127.254	172.16.127.255
172.16.128.0	172.16.128.1	172.16.191.254	172.16.191.255
172.16.192.0	172.16.192.1	172.16.255.254	172.16.255.255