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Assignment 3

1. 192.168.2.76/28

128	64	32	16	8	4	2	1
11000000	010101000	00000010	01001100				
11111111	11111111	11111111	11110000				
11000000	010101000	00000010	01000000				
192	168	2	64				

1st usable 192.168.2.65

2. 192.168.2.76/9

11000000	010101000	00000010	01001100
11111111	10000000	00000000	00000000
11000000	10000000	00000000	00000000
192	128	0	0

1st usable 192.128.0.1

3. 192.168.2.137/27

11000000	010101000	00000010	10001001
11111111	11111111	11111111	11100000
11000000	010101000	00000010	10000000
192	168	2	128

1st usable 192.168.2.129* 5. 10.10.2.8/29 $32-29=3$ $2^3=8$

01100100	00001010	00000010	00001000
11111111	11111111	11111111	11111000
01100100	00001010	00000010	00001000
101	10	2	8

Total Address = 8 Usable Address = 6

4. 10.10.2.8/15 $32-15=17$ $2^{17}=131072$

Total Addresses = 131072

Usable Addresses = 131070

(2)

Assignment 3

6. 192.168.2.137/27

128 64 32 16 8 4 2 1

11000000 . 10101000 . 00000010 . 10001001

11111111 11111111 11111111 11100000

11000000 . 10101000 . 00000010 . 10000000

192 . 168 . 2 . 128

Broadcast Address = 192.168.2.159

Last Address = 192.168.2.158

7. 110.10.2.55/30

255 . 255 . 255 . 252

256

252

110.10.2.55

4, 8, 12, 16, 20, 24, 28,

N 110.10.2.52

32, 36, 40, 44, 48,

1 110.10.2.53

52, 56

Last L 110.10.2.54

Broadcast B 110.10.2.55