

	LAN#2	192.168.2.0/24	For 15 Hosts	Use Subnet# 06
Given IP	192.168.2.0 / 24 (Network Bit: 24, Host Bit: 8)			
Borrow?	For 15 Hosts			
	$15+2 = 17$ (5 bit)			
NEW	NB: $NB + 3 = 24+3 = 27$			
	Host Bit – 5 = 8 – 5 = 3 bit borrow.			
	NEW Host Bit: Host Bit – borrowed bit = 8 – 3 = 5 bit (host bit)			
	192.168.2.0 / 27 (Network Bit: 27, Host Bit: 5)			
Total # of subnet	$2^n = 2^3 = 8$ [n = number of borrowed bit]			
Usable Ip per subnet	$2^n - 2 = 2^5 - 2 = 30$ Ip per subnet [n = new host bit] 1 st usable ip → Default gateway			
#6 subnet	6 = 110 (Binary)			
Network Address	192.168.2.0 / 27 (Network Bit: 27, Host Bit: 5) 192.168.2. 110 0 0000 192.168.2.192			
Broadcast Address	192.168.2. 110 1 1111 192.168.2. 223			
Subnet Mask	192.168.2.0 / 27 (Network Bit: 27, Host Bit: 5) 255.255.255. 111 0 000 255.255.255.224			
LAN#2	SUBNET MASK: 255.255.255.224 Network Address: 192.168.2.192 Default Gateway: 192.168.2.193 1 st Usable IP: 192.168.2.194			
	192.168.100.0/30 SM: 255.255.255. 252			
Given Details	LAN#1 Network	192.168.104.0/24	For 17 Hosts	Use Subnet# 05
Given IP	192.168.104.0/24 (Network Bit: 24, Host Bit: 8)			
For 17 Hosts	$17+2 = 19$ (5 bit)			
How many bit we have to borrow?	Borrowed bit = Host bit – 5 bit = 8 – 5 = 3 bit borrow.			
New Information	Network bit: Prev Net bit + Borrowed Bit = 24 + 3 = 27 bit Host Bit: 32 – 27 = 5 bit			

NEW REP	192.168.104.0/27 (Network Bit: 27 , Hot Bit:5)
Subnet Mask	255.255.255.111 0 0000 255.255.255.224
Total # of subnet	$2^n = 2^3 = 8$ subnet
Total # of usable IP Per subnet	$2^n - 2 = 2^5 - 2 = 32 - 2 = 30$ ip per subnet.
Subnet #5	5 = (Binary of 5: <u>101</u>)
Network Address	192.168.104.0/27 (Network Bit: 27 , Hot Bit:5) 192.168.104. <u>1010</u> 0000 192.168.104.160
Default Gateway	192.168.104.161
1 st ip	192.168.104.162
Broadcast Address	192.168.104. 101 1 1111 192.168.104. 191
Subnet mask	255.255.255.224