***Subnetting Class C networks Based on Host Requirements***

1. Convert the Number of hosts to binary.
   1. 25 = 5Bits
2. Reserve bits in the mask and find your increment.
   1. /24 = 11111111.11111111.11111111.00000000
   2. /27 = .11100000
      1. 255.255.255.224
3. Use increment to generate network ranges.
   1. 192.168.5.0
   2. 192.168.5.32

While planning a small network for a client, you determine there are 75 hosts that need access to the 192.168.1.0 network. Which of the following subnet masks will meet the network requirements?

128|64|32|16|8|4|2|0

01111111

10000000

/25

255.255.255.128

***Subnetting Class B Networks Based on Host Requirements***

You are addressing the Petropolis regional management office networks using, 172.30.0.0/16 subnets. Each office should handle up to 80 host IP addresses.

1. 80 = 7 bits 01111111
2. /16 = 11111111.11111111.0000000.00000000
3. /25 = .11111111.10000000
4. 255.255.255.128
5. Create the network ranges
6. 172.30.0.0-127
7. 172.30.0.128-255
8. 172.30.1.0-127

Your goal is to break up the 172.16.0.0 network to allocate 2,000 host within the subnet. Which of the following subnets will help you achieve that goal?

2048|1024|512|256128|64|32|16|8|4|2|0

0111.11111111

11111111.11111111.00000000.00000000

.11111000.00000000 = 255.255.255.248.0 = 255-1-2-4

***Subnetting Class A Networks Based on Host Requirements***

To determine the usable host range in a network segment, which of the following should be subtracted from your increment? (Choose two)

Broad Cast

Network