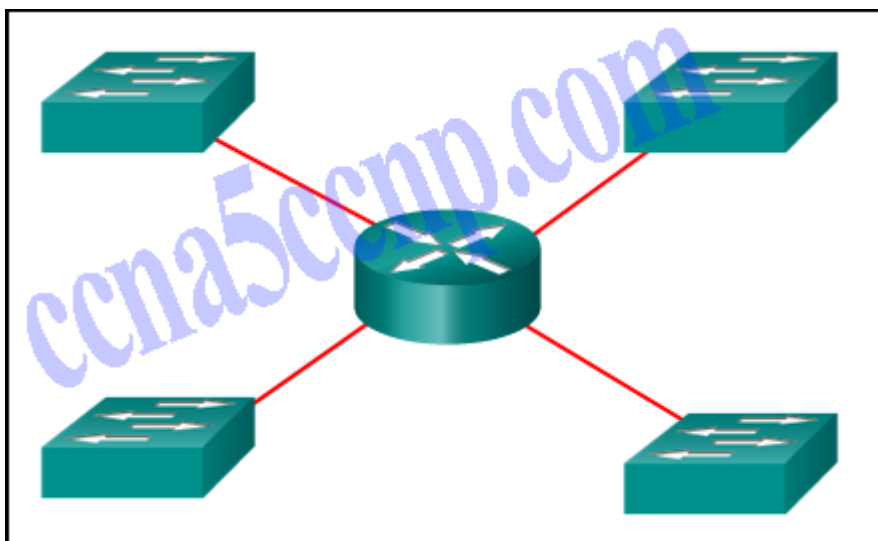


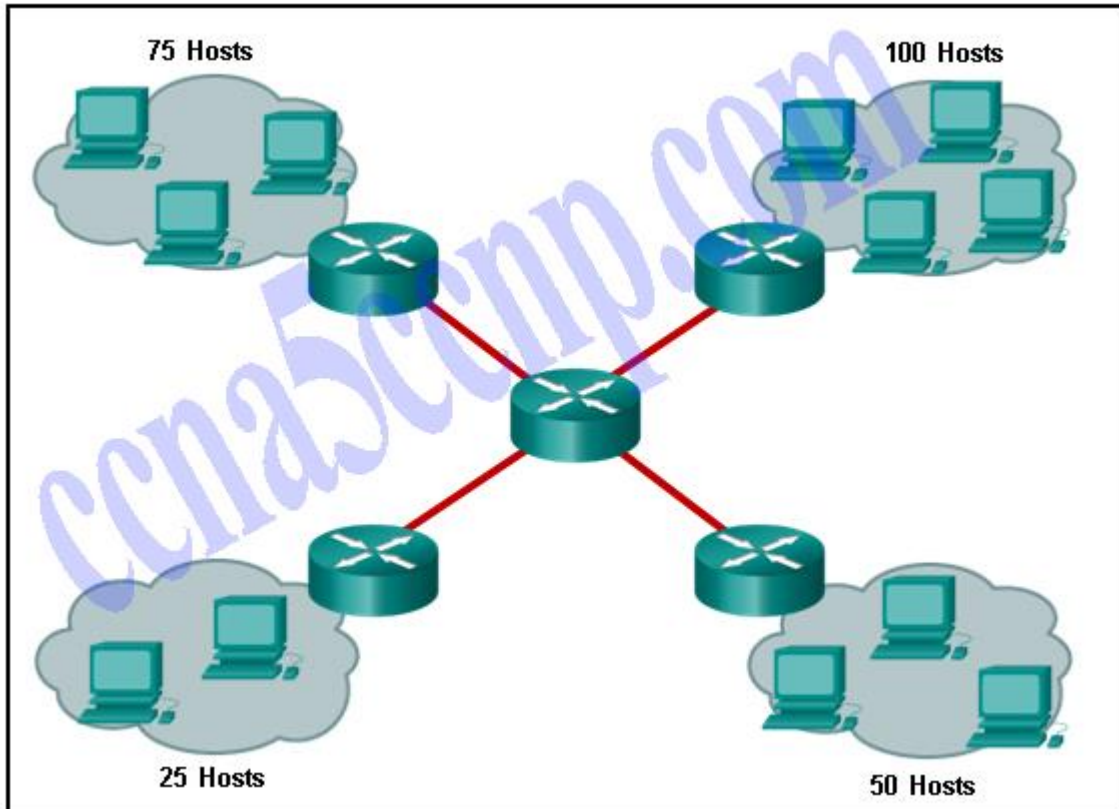
## CCNA 1 Chapter 8 2016 v5.1 Answers 100%

1. What is a result of connecting two or more switches together?
  - The number of broadcast domains is increased.
  - The size of the broadcast domain is increased.**
  - The number of collision domains is reduced.
  - The size of the collision domain is increased.
2. Refer to the exhibit. How many broadcast domains are there?



CCNA1 Chapter 8 v5.1 002

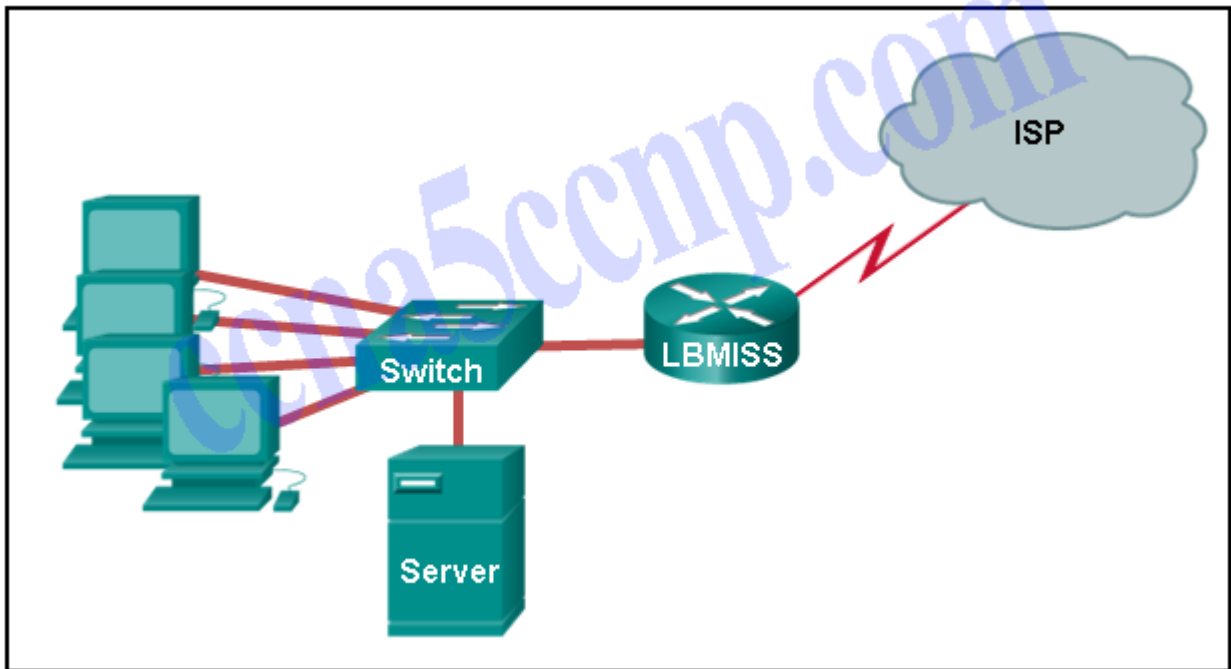
- 1
  - 2
  - 3
  - 4
3. What are two reasons a network administrator might want to create subnets? (Choose two.)
    - simplifies network design
    - improves network performance**
    - easier to implement security policies**
    - reduction in number of routers needed
    - reduction in number of switches needed
  4. Refer to the exhibit. A company uses the address block of 128.107.0.0/16 for its network. What subnet mask would provide the maximum number of equal size subnets while providing enough host addresses for each subnet in the exhibit?



CCNA1 Chapter 8 v5.1 001

- 255.255.255.0
- 255.255.255.128
- 255.255.255.192
- 255.255.255.224
- 255.255.255.240

5. Refer to the exhibit. The network administrator has assigned the LAN of LBMISS an address range of 192.168.10.0. This address range has been subnetted using a /29 prefix. In order to accommodate a new building, the technician has decided to use the fifth subnet for configuring the new network (subnet zero is the first subnet). By company policies, the router interface is always assigned the first usable host address and the workgroup server is given the last usable host address. Which configuration should be entered into the properties of the workgroup server to allow connectivity to the Internet?



## CCNA1 Chapter 8 v5.1 004

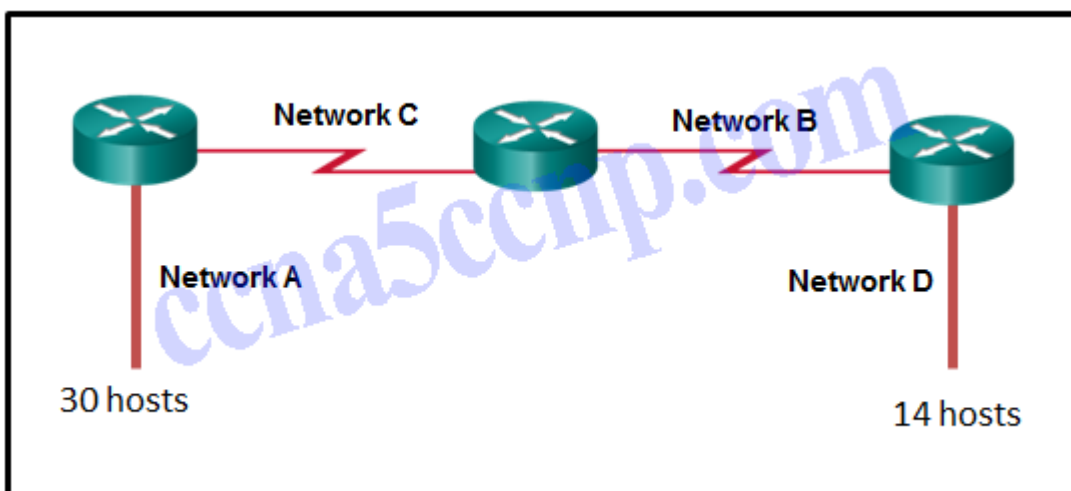
- IP address: 192.168.10.65 subnet mask: 255.255.255.240, default gateway: 192.168.10.76
  - IP address: 192.168.10.38 subnet mask: 255.255.255.240, default gateway: 192.168.10.33
  - **IP address: 192.168.10.38 subnet mask: 255.255.255.248, default gateway: 192.168.10.33**
  - IP address: 192.168.10.41 subnet mask: 255.255.255.248, default gateway: 192.168.10.46
  - IP address: 192.168.10.254 subnet mask: 255.255.255.0, default gateway: 192.168.10.1
6. If a network device has a mask of /28, how many IP addresses are available for hosts on this network?
- 256
  - 254
  - 62
  - 32
  - 16
  - **14**
7. Which subnet mask would be used if 5 host bits are available?
- 255.255.255.0
  - 255.255.255.128
  - **255.255.255.224**

- 255.255.255.240
8. How many host addresses are available on the network 172.16.128.0 with a subnet mask of 255.255.252.0?
- 510
  - 512
  - **1022**
  - 1024
  - 2046
  - 2048
9. How many bits must be borrowed from the host portion of an address to accommodate a router with five connected networks?
- two
  - **three**
  - four
  - five
10. A network administrator wants to have the same network mask for all networks at a particular small site. The site has the following networks and number of devices:
- |           |   |    |                  |
|-----------|---|----|------------------|
| IP phones | – | 22 | addresses needed |
| PCs       | – | 20 | addresses needed |
| Printers  | – | 2  | addresses needed |
| Scanners  | – | 2  | addresses needed |
- The network administrator has deemed that 192.168.10.0/24 is to be the network used at this site. Which single subnet mask would make the most efficient use of the available addresses to use for the four subnetworks?
- 255.255.255.0
  - 255.255.255.192
  - **255.255.255.224**
  - 255.255.255.240
  - 255.255.255.248
  - 255.255.255.252
11. A company has a network address of 192.168.1.64 with a subnet mask of 255.255.255.192. The company wants to create two subnetworks that would contain 10 hosts and 18 hosts respectively. Which two networks would achieve that? (Choose two.)
- 192.168.1.16/28
  - **192.168.1.64/27**
  - 192.168.1.128/27
  - **192.168.1.96/28**
  - 192.168.1.192/28

12. A network administrator is variably subnetting a network. The smallest subnet has a mask of 255.255.255.248. How many usable host addresses will this subnet provide?

- 4
- 6
- 8
- 10
- 12

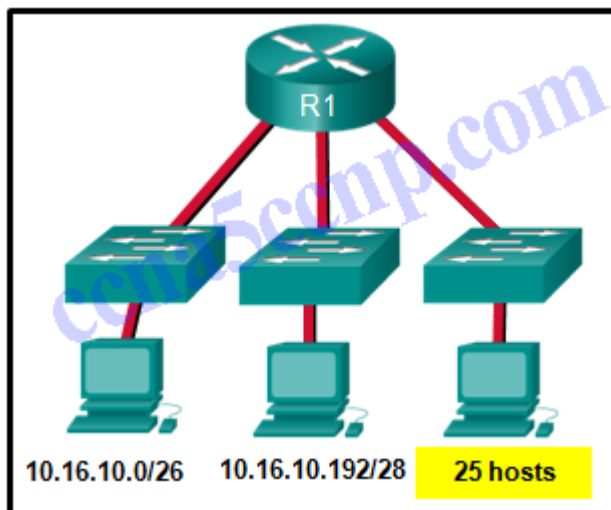
13. Refer to the exhibit. Given the network address of 192.168.5.0 and a subnet mask of 255.255.255.224, how many total host addresses are unused in the assigned subnets?



CCNA1 Chapter 8 v5.1 005

- 56
- 60
- 64
- 68
- 72

14. Refer to the exhibit. Considering the addresses already used and having to remain within the 10.16.10.0/24 network range, which subnet address could be assigned to the network containing 25 hosts?



CCNA1 Chapter 8 v5.1 007

- 10.16.10.160/26
- 10.16.10.128/28
- 10.16.10.64/27
- 10.16.10.224/26
- 10.16.10.240/27
- 10.16.10.240/28

15. A network administrator needs to monitor network traffic to and from servers in a data center. Which features of an IP addressing scheme should be applied to these devices?

1. random static addresses to improve security
2. addresses from different subnets for redundancy
3. **predictable static IP addresses for easier identification**
4. dynamic addresses to reduce the probability of duplicate addresses

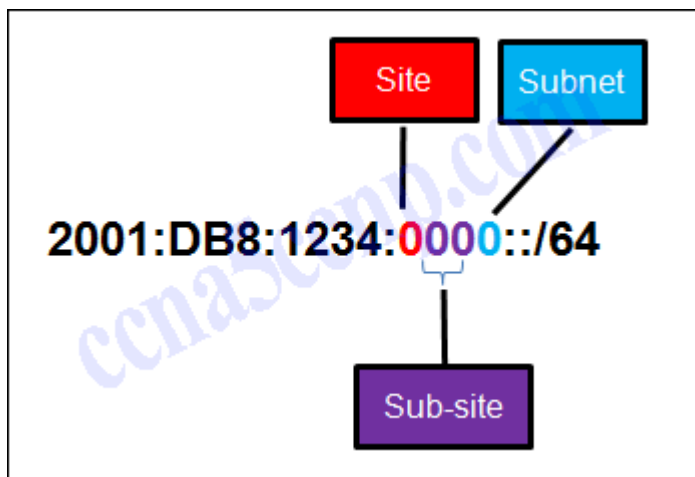
16. Which two reasons generally make DHCP the preferred method of assigning IP addresses to hosts on large networks? (Choose two.)

- It eliminates most address configuration errors.**
- It ensures that addresses are only applied to devices that require a permanent address.
- It guarantees that every device that needs an address will get one.
- It provides an address only to devices that are authorized to be connected to the network.
- It reduces the burden on network support staff.**

17. A DHCP server is used to assign IP addresses dynamically to the hosts on a network. The address pool is configured with 192.168.10.0/24. There are 3 printers on this network that need to use reserved static IP addresses from the pool. How many IP addresses in the pool are left to be assigned to other hosts?

- 254
- **251**
- 252
- 253

18. Refer to the exhibit. A company is deploying an IPv6 addressing scheme for its network. The company design document indicates that the subnet portion of the IPv6 addresses is used for the new hierarchical network design, with the site subsection to represent multiple geographical sites of the company, the sub-site section to represent multiple campuses at each site, and the subnet section to indicate each network segment separated by routers. With such a scheme, what is the maximum number of subnets achieved per sub-site?



CCNA1 Chapter 8 v5.1 006

- 0
- 4
- **16**
- 256

19. What is the prefix for the host address `2001:DB8:BC15:A:12AB::1/64`?

- 2001:DB8:BC15
- **2001:DB8:BC15:A**
- 2001:DB8:BC15:A:1
- 2001:DB8:BC15:A:12

20. Consider the following range of addresses:

```
2001:0DB8:BC15:00A0:0000::
2001:0DB8:BC15:00A1:0000::
2001:0DB8:BC15:00A2:0000::
```

...

2001:0DB8:BC15:00AF:0000::

The prefix-length for the range of addresses is /60

21. Match the subnetwork to a host address that would be included within the subnetwork. (Not all options are used.)

○ Question

192.168.1.32/27	192.168.1.63
192.168.1.64/27	192.168.1.68
192.168.1.96/27	192.168.1.128
	192.168.1.48
	192.168.1.121

CCNA1 Chapter 8 v5.1 001 Question

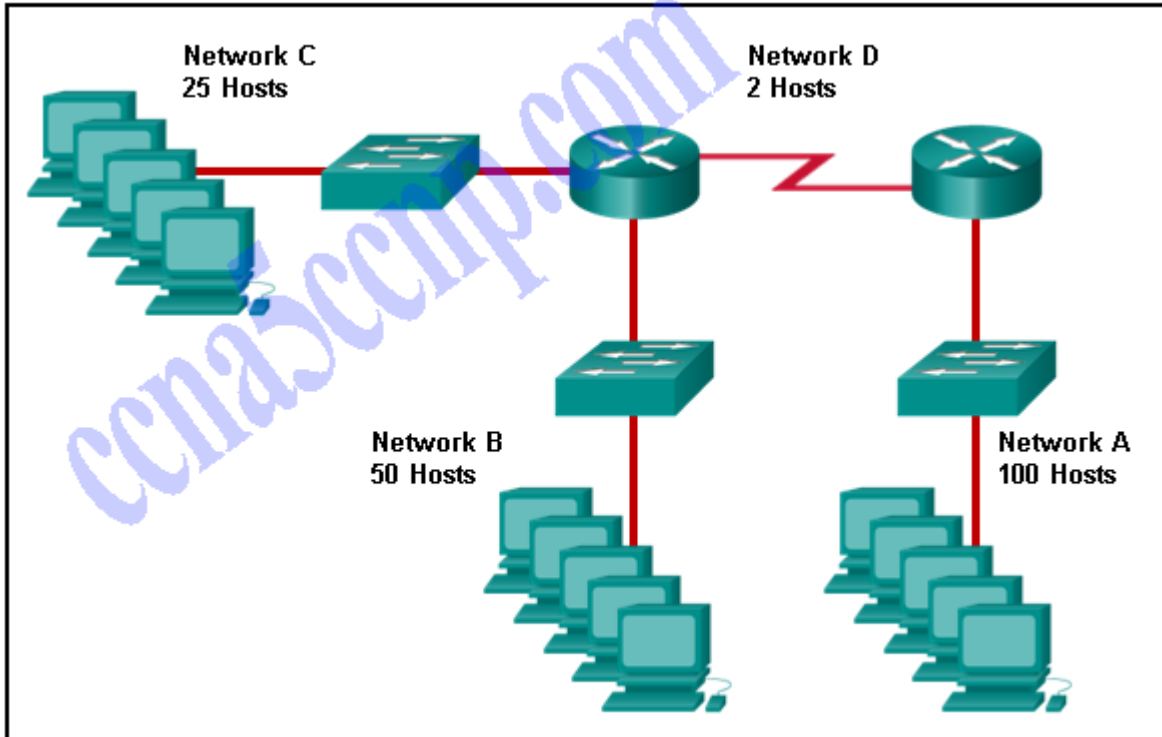
○ Answer

192.168.1.63
192.168.1.64/27
192.168.1.128
192.168.1.32/27
192.168.1.96/27

CCNA1 Chapter 8 v5.1 001 Answer

22. Refer to the exhibit. Match the network with the correct IP address and prefix that will satisfy the usable host addressing requirements for each network. (Not all options are used.)





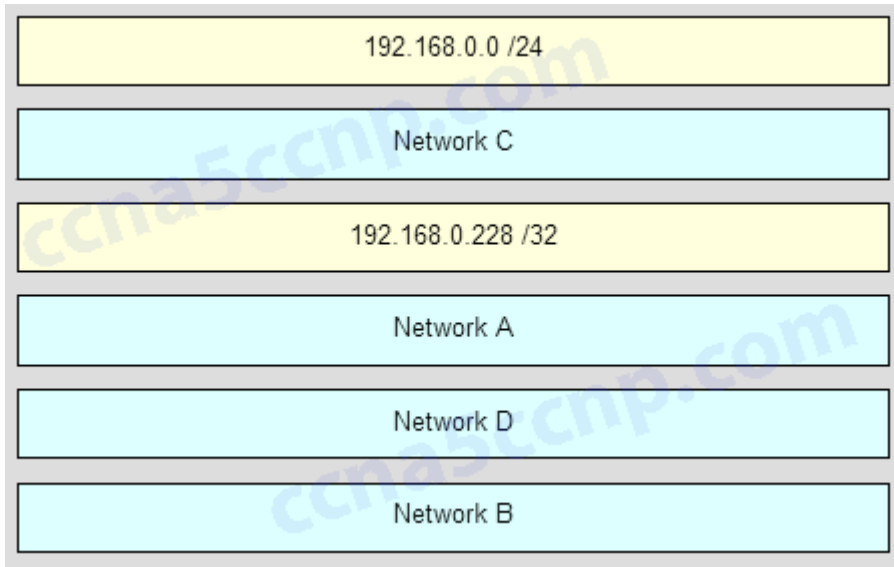
CCNA1 Chapter 8 v5.1 003

Question

Network A	192.168.0.0 /24
Network B	192.168.0.192 /27
Network C	192.168.0.228 /32
Network D	192.168.0.0 /25
	192.168.0.224 /30
	192.168.0.128 /26

CCNA1 Chapter 8 v5.1 002 Question

Answer



CCNA1 Chapter 8 v5.1 002 Answer