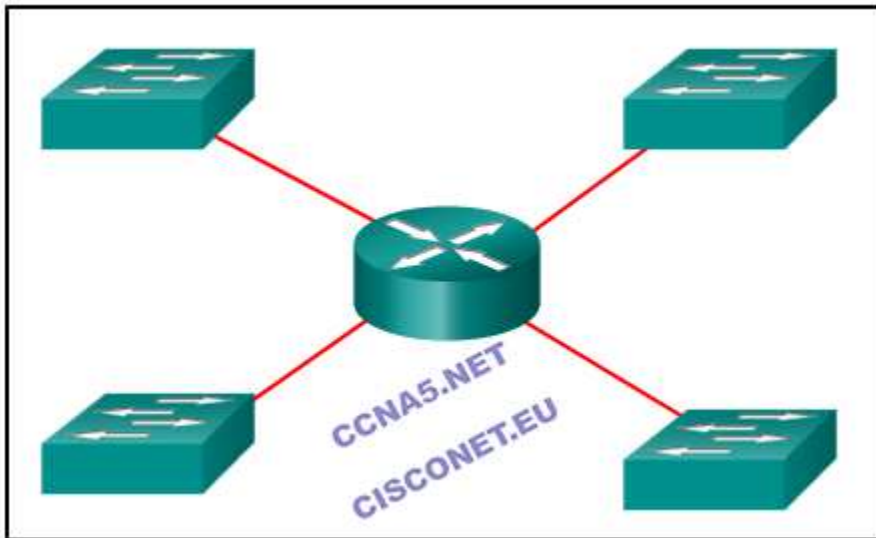# CCNA 1 Chapter 9 v5.0 Exam Answers 2013

1

Refer to the exhibit.

How many broadcast domains are there?

1
2
3
4*

2

How many usable host addresses are there in the subnet 192.168.1.32/27?

32
30*
64
16
62

3

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

4
A network administrator is variably subnetting a network. The smallest subnet has a mask of 255.255.255.248. How many host addresses will this subnet provide?
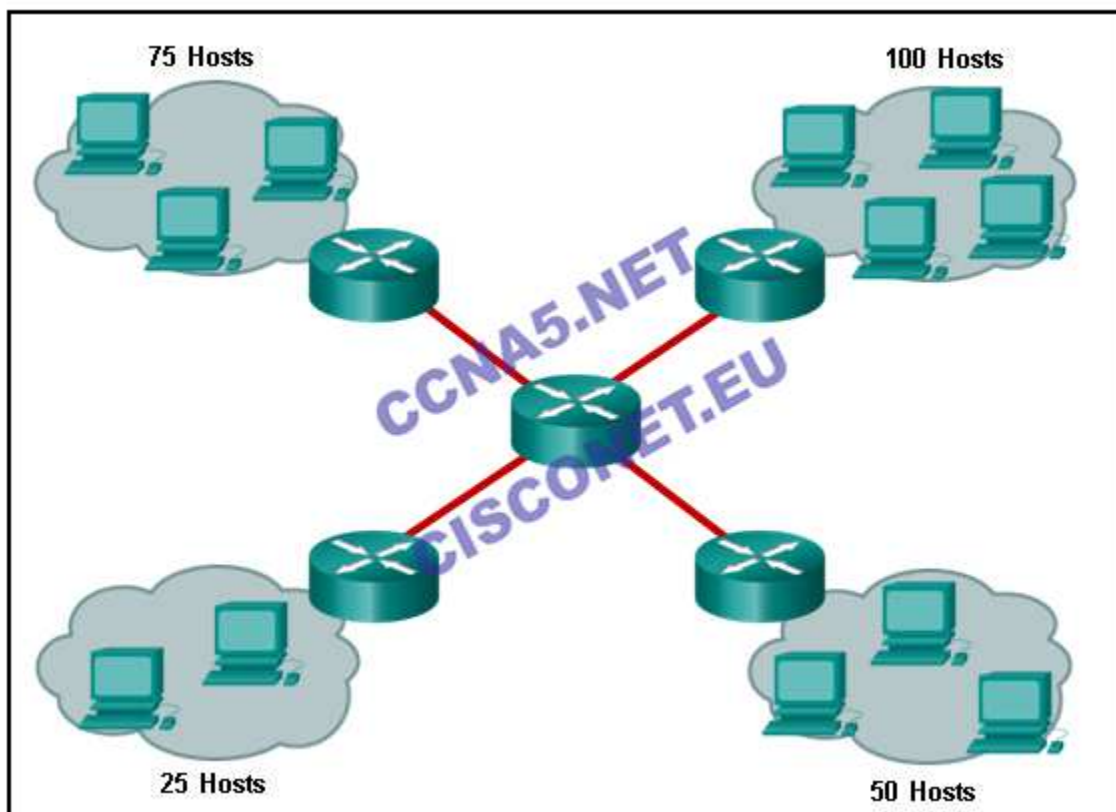
4
6*
8
10
12

5
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?
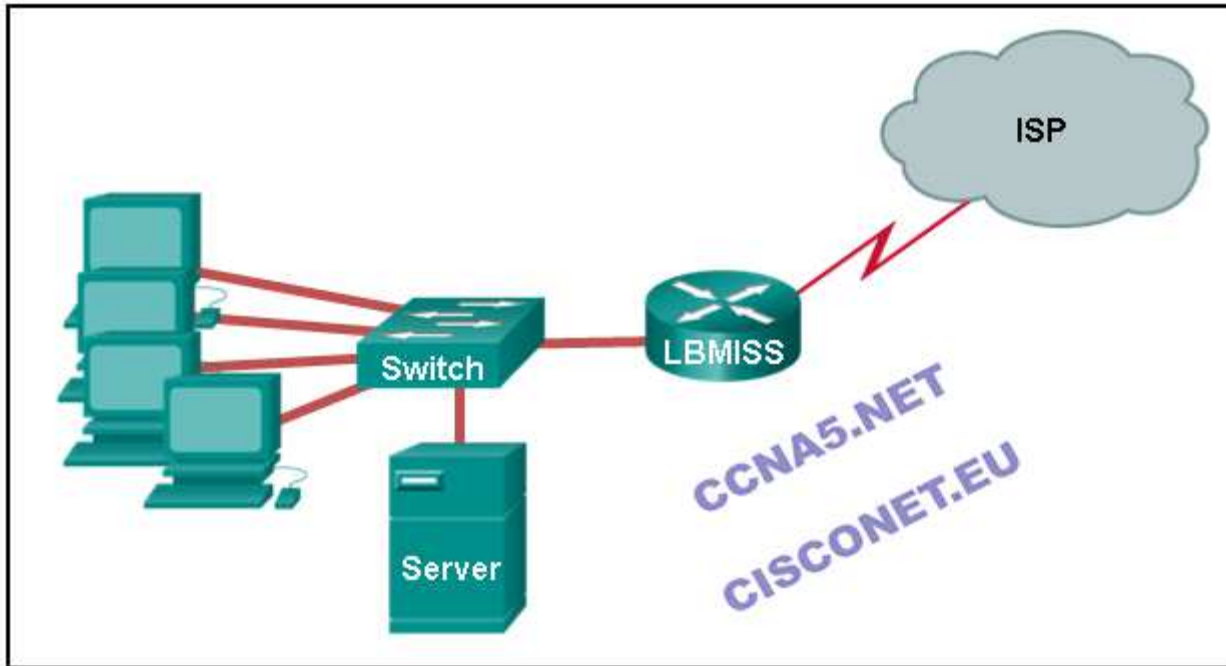
255.255.255.0
255.255.255.128*
255.255.255.192
255.255.255.224
255.255.255.240

6
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?

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

7
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

8
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

9
In a network that uses IPv4, what prefix would best fit a subnet containing 100 hosts?
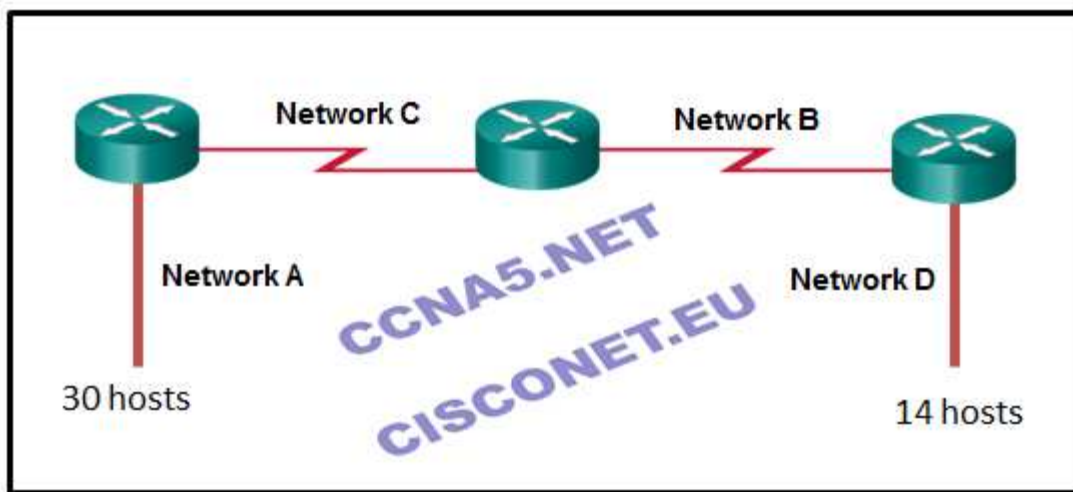
/23
/24
/25*
/26

10
Refer to the exhibit.

Given the network address of 192.168.5.0 and a subnet mask of 255.255.255.224, how many addresses are wasted in total by subnetting each network with a subnet mask of 255.255.255.224?

56
60
64
68
72*

11
When developing an IP addressing scheme for an enterprise network, which devices are recommended to be grouped into their own subnet or logical addressing group?

end-user clients
workstation clients
mobile and laptop hosts
hosts accessible from the Internet*

12

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?

random static addresses to improve security

addresses from different subnets for redundancy

predictable static IP addresses for easier identification*

dynamic addresses to reduce the probability of duplicate addresses

13

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.
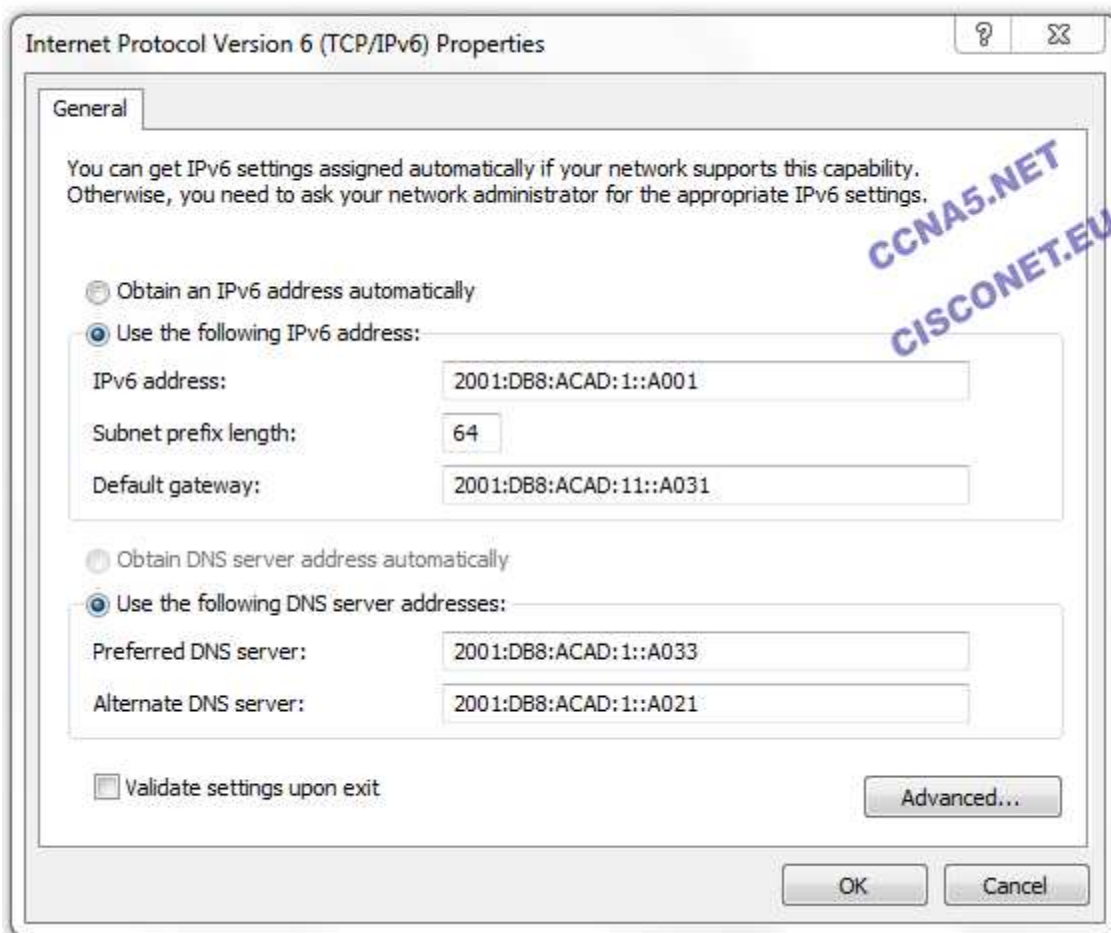
It guarantees that every device that needs an address will get one.

It provides an address only to devices that are authorized to be connected to the network.

It reduces the burden on network support staff.*

14

Refer to the exhibit.

A computer that is configured with the IPv6 address as shown in the exhibit is unable to access the internet. What is the problem?

The DNS address is wrong.

There should not be an alternative DNS address.

The gateway address is in the wrong subnet.*

The settings were not validated.

15

When subnetting a /64 IPv6 network prefix, which is the preferred new prefix?

/66

/70

/72*

/74

16

What is the subnet address for the address 2001:DB8:BC15:A:12AB::1/64?

2001:DB8:BC15::0

2001:DB8:BC15:A::0*

2001:DB8:BC15:A:1::1

2001:DB8:BC15:A:12::0

17

Which two notations are useable nibble boundaries when subnetting in IPv6? (Choose two.)

/62

/64*

/66

/68*

/70

18

Fill in the blank.

In dotted decimal notation, the IP address   "**172.25.0.126**"   is the last host address for the network 172.25.0.64/26.

The binary representation of the network
address 172.25.0.64 is 10101100.00011001.00000000.01000000,
where the last six zeros represent the host part of the address.
The last address on that subnet would have the host part equal to 111111,
and the last host address would end in 111110. This results in a binary
representation of the last host of the IP address as 10101100.00011001.00000000.01111110,
which translates in decimal to 172.25.0.126.

19

Fill in the blank.

In dotted decimal notation, the subnet mask   "**255.255.254.0**"   will accommodate 500 hosts per subnet.

If the network has to accommodate 500 hosts per subnet, then we need 9 host bits
(2^9 – 2 = 510 hosts). The Class B subnet mask has 16 bits available and if

we use 9 bits for hosts, we will have 7 network bits remaining.The subnet mask
with 9 host bits is 11111111.11111111.11111110.00000000, which corresponds
to 255.255.254.0.

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 for the range of addresses is   "**60**"   .

All the addresses have the part 2001:0DB8:BC15:00A
in common. Each number or letter in the address
represents 4 bits, so the prefix is /60.
21
Fill in the blank.

A nibble consists of   "**4**"   bits.

A nibble is half of a byte or 4 bits. This is significant because
subnetting in IPv6 is usually done on a nibble boundary.

22
Question as presented:

22
Question as presented:

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

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

Place the options in the following order:
- not scored -
192.168.1.64/27
- not scored -
192.168.1.32/27
192.168.1.96/27

Place the options in the following order:
- not scored -
192.168.1.64/27
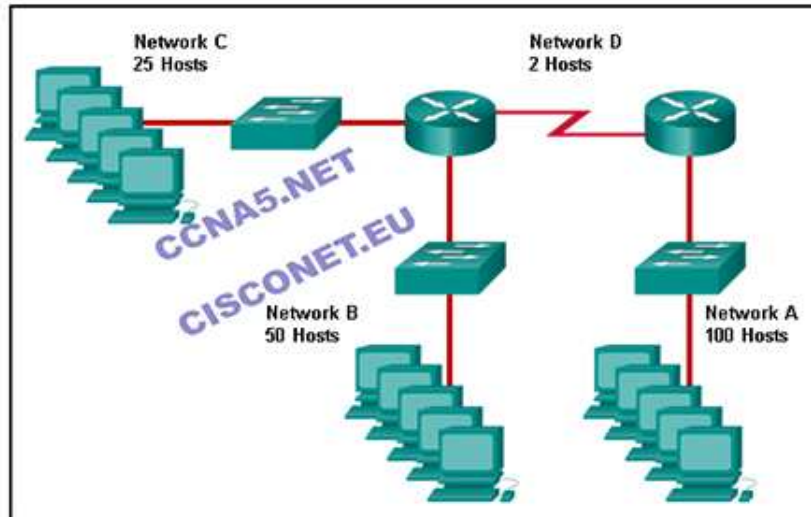- not scored -
192.168.1.32/27
192.168.1.96/27

23
Question as presented:

Question as presented:

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.)

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

Place the options in the following order:
- not scored -
Network C
- not scored -
Network A
Network D
Network B

24
Open the PT Activity.

Perform the tasks in the activity instructions and then answer the question.

What issue is causing Host A to be unable to communicate with Host B?

The subnet mask of host A is incorrect.

Host A has an incorrect default gateway.

Host A and host B are on overlapping subnets.*

The IP address of host B is not in the same subnet as the default gateway is on.