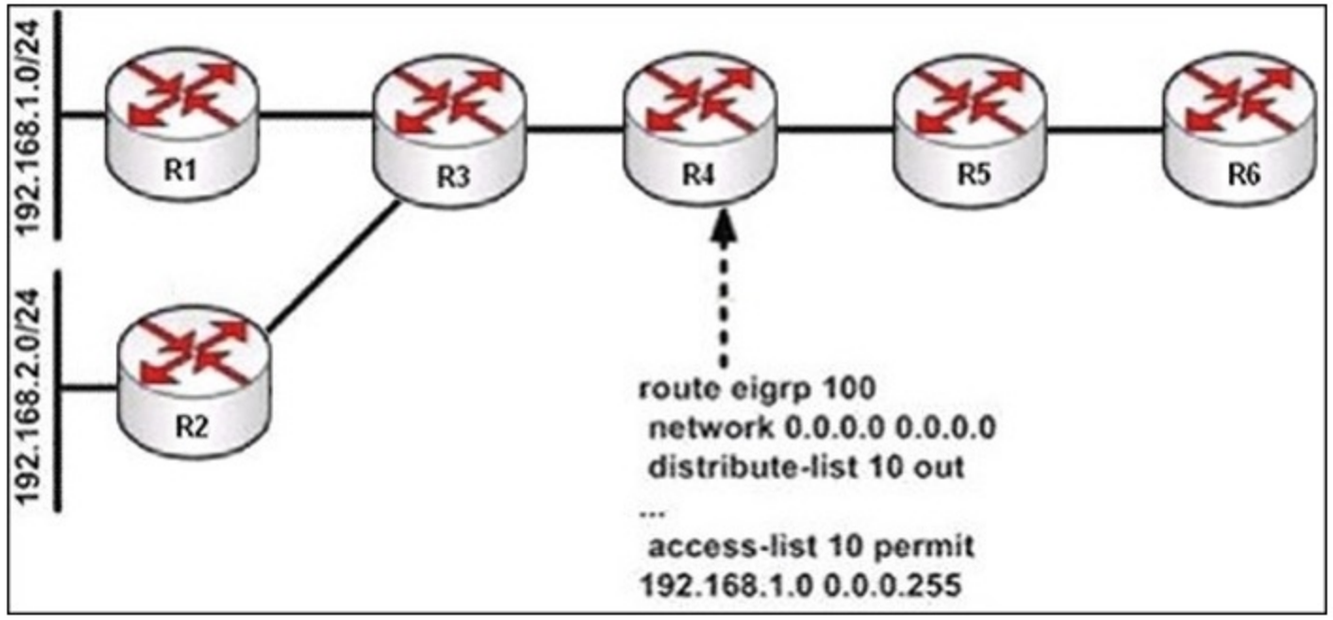
Item 19 of 38 (Exam A, Q280)

Show Answer | Calculator

Refer to the exhibit.
For this network, assume all routers have been configured to run EIGRP in AS 100, and have also been configured to run EIGRP on all connected links.
If the link between R3 and R4 fails, how many queries will R5 and R6 receive?



A. R6 will receive two queries, one for 192.168.1.0/24 and one for 192.168.2.0/24. R5 will receive one query, for 192.168.1.0/24.
B. Both R5 and R6 will receive two queries, one for 192.168.1.0/24 and one for 192.168.2.0/24.
C. Neither R5 nor R6 will receive any queries for either 192.168.1.0/24 or 192.168.2.0/24.
D. R5 will receive one query, for 192.168.1.0/24, and R6 will receive no queries.

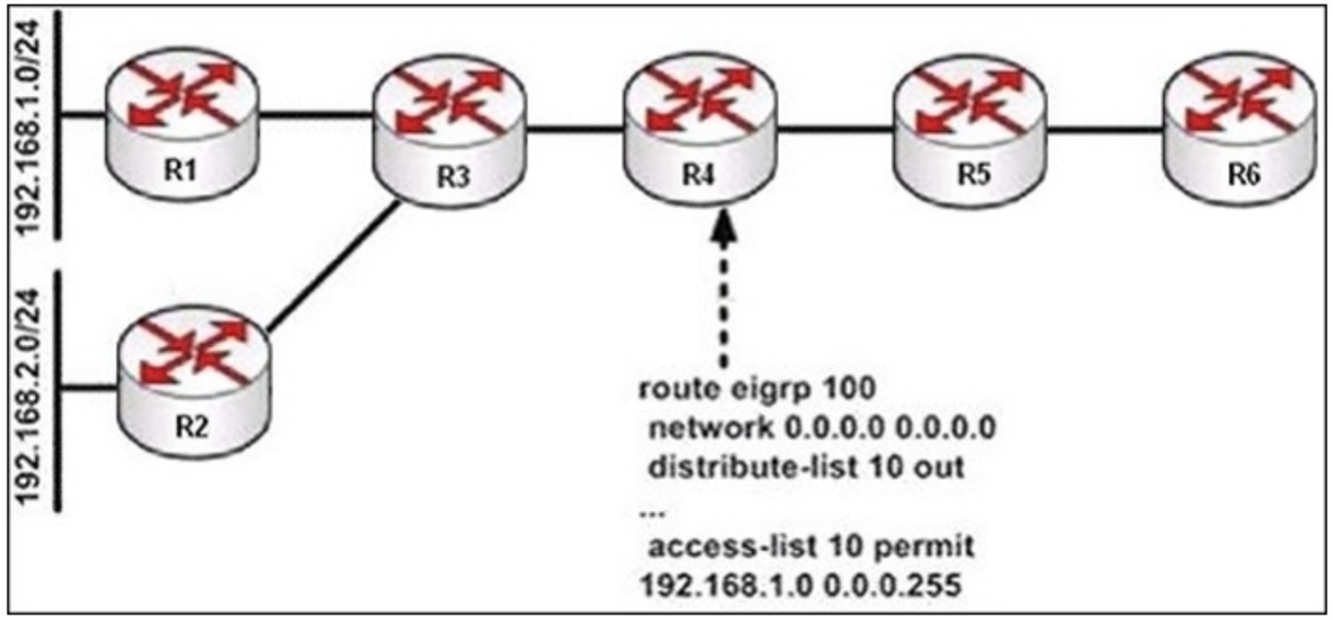
Select the best choice.

100%

Item 19 of 38 (Exam A, Q280)

Hide Answer | Calculator

Refer to the exhibit.
For this network, assume all routers have been configured to run EIGRP in AS 100, and have also been configured to run EIGRP on all connected links.
If the link between R3 and R4 fails, how many queries will R5 and R6 receive?



A. R6 will receive two queries, one for 192.168.1.0/24 and one for 192.168.2.0/24. R5 will receive one query, for 192.168.1.0/24.

B. Both R5 and R6 will receive two queries, one for 192.168.1.0/24 and one for 192.168.2.0/24.

C. Neither R5 nor R6 will receive any queries for either 192.168.1.0/24 or 192.168.2.0/24.

D. R5 will receive one query, for 192.168.1.0/24, and R6 will receive no queries.

Answer: A
Section: EIGRP

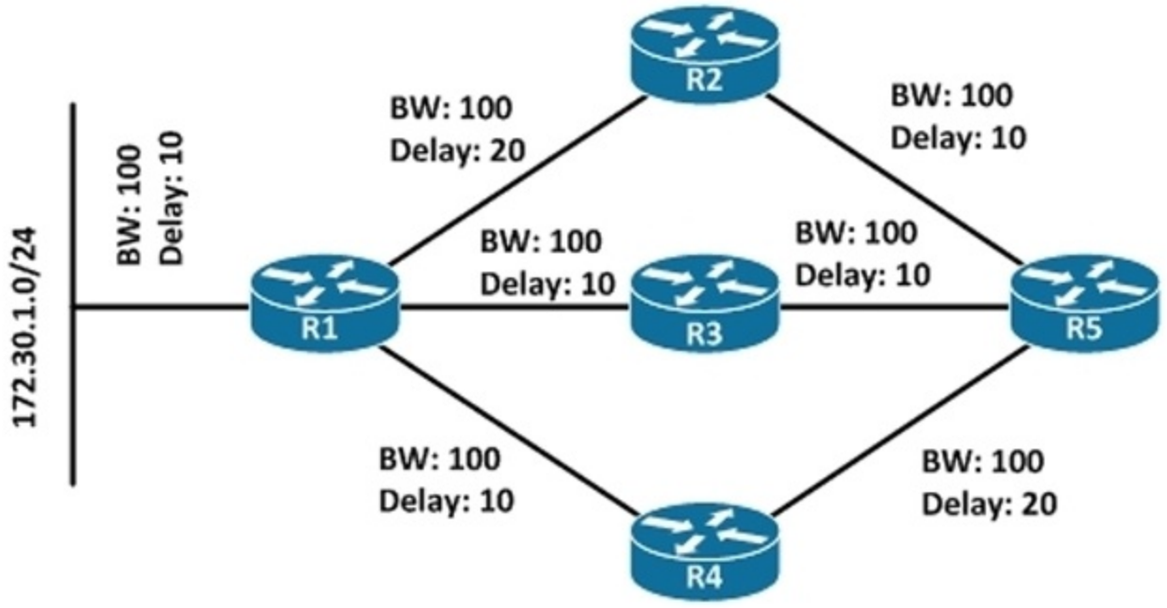
Select the best choice.

100%

Item 20 of 38 (Exam A, Q408)

Show Answer | Calculator

Refer to the exhibit.
Assuming EIGRP is the routing protocol, if the link between R3 and R5 failed, how many queries would R5 send out?



A. R5 would not send out any queries, but it would switch to using the path through R4.
B. R5 would send queries to R2 and R4.
C. R5 would send a query to R4, but not to R2.
D. R5 would send a query to R2, but not to R4.

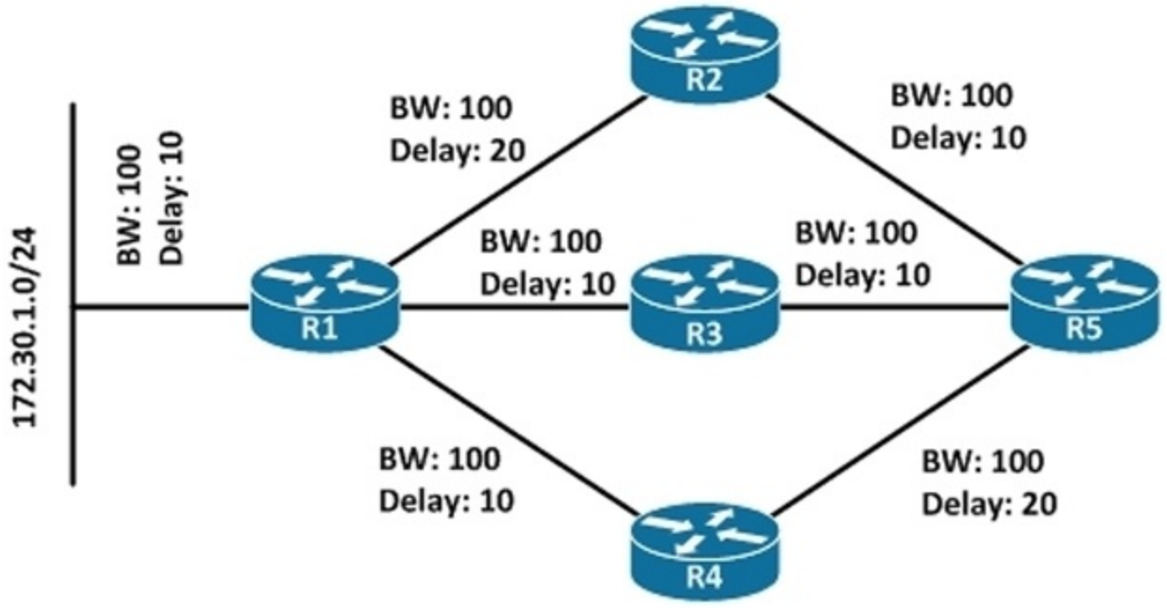
Select the best choice.

100%

Item 20 of 38 (Exam A, Q408)

Hide Answer | Calculator

Refer to the exhibit.
Assuming EIGRP is the routing protocol, if the link between R3 and R5 failed, how many queries would R5 send out?



A. R5 would not send out any queries, but it would switch to using the path through R4.
B. R5 would send queries to R2 and R4.
C. R5 would send a query to R4, but not to R2.
D. R5 would send a query to R2, but not to R4.

Answer: A
Section: EIGRP

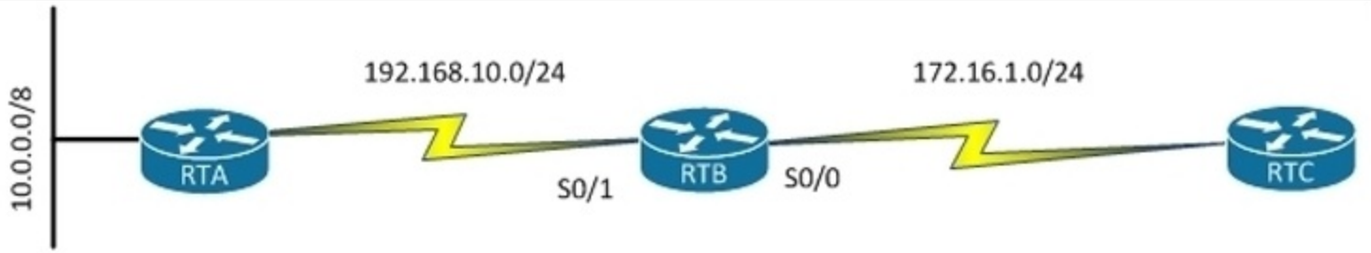
Select the best choice.

100%

Item 21 of 38 (Exam A, Q281)

Show Answer | Calculator

Based on the information in the exhibit, which statement is true?




```
hostname RTB
!
router eigrp 10
 network 192.168.10.0
 network 172.16.0.0
 distribute-list 10 out s0/0
!
access-list 10 permit 192.168.10.0 0.0.0.255
```

A. RTC will be able to access the 10.0.0.0 network.

B. RTC will not have the 10.0.0.0 network in its routing table.

C. RTC will not have the 192.168.10.0 network in its routing table.

D. RTB will not have the 10.0.0.0 network in its routing table.

E. RTB and RTC will not have the 10.0.0.0 network in their routing tables.

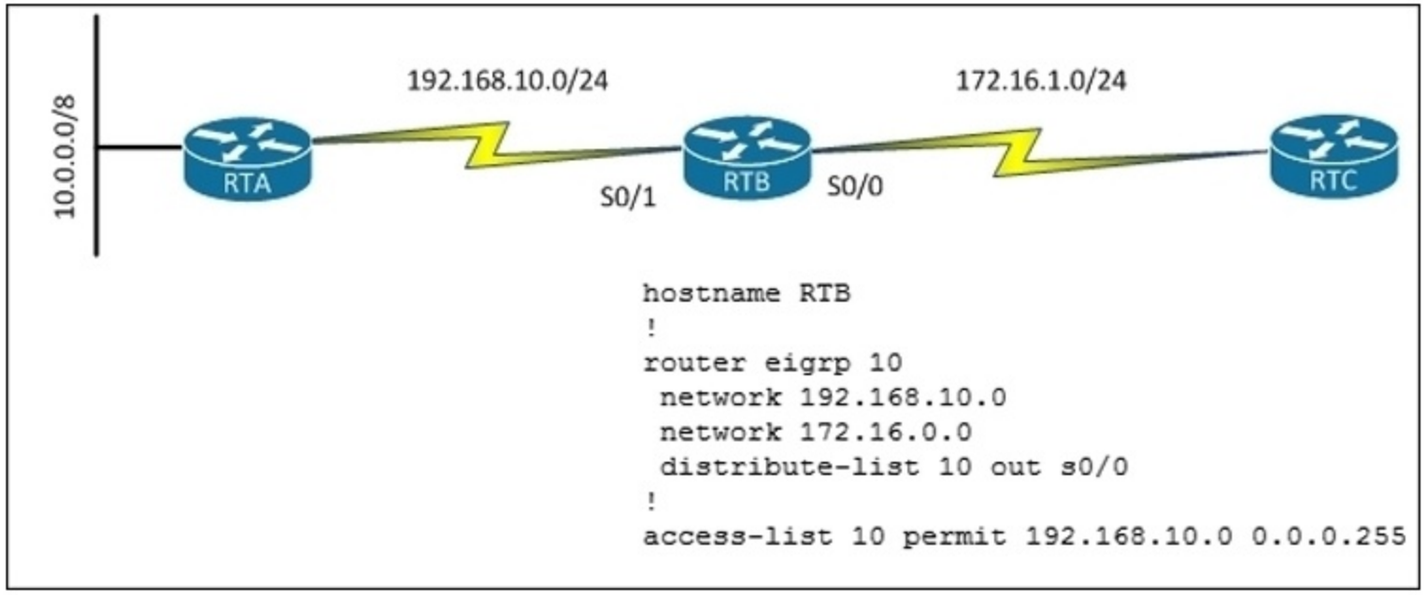
Select the best choice.

100%

Item 21 of 38 (Exam A, Q281)

Hide Answer | Calculator

Based on the information in the exhibit, which statement is true?



A. RTC will be able to access the 10.0.0.0 network.

B. RTC will not have the 10.0.0.0 network in its routing table.

C. RTC will not have the 192.168.10.0 network in its routing table.

D. RTB will not have the 10.0.0.0 network in its routing table.

E. RTB and RTC will not have the 10.0.0.0 network in their routing tables.

Answer: B
Section: EIGRP

Select the best choice.

100%

Item 22 of 38 (Exam A, Q161)

Show Answer | Calculator

Though many options are supported in EIGRPv6, select two options from the below list that are supported. (Choose two.)

- A. VRF
- B. auto-summary
- C. per-interface configuration
- D. prefix-list support via route-map
- E. prefix-list support via distribute-list

Select all that apply.

100%

Item 22 of 38 (Exam A, Q161)

Hide Answer | Calculator

Though many options are supported in EIGRPv6, select two options from the below list that are supported. (Choose two.)

- A. VRF
- B. auto-summary
- C. per-interface configuration
- D. prefix-list support via route-map
- E. prefix-list support via distribute-list

Answer: CE
Section: EIGRP

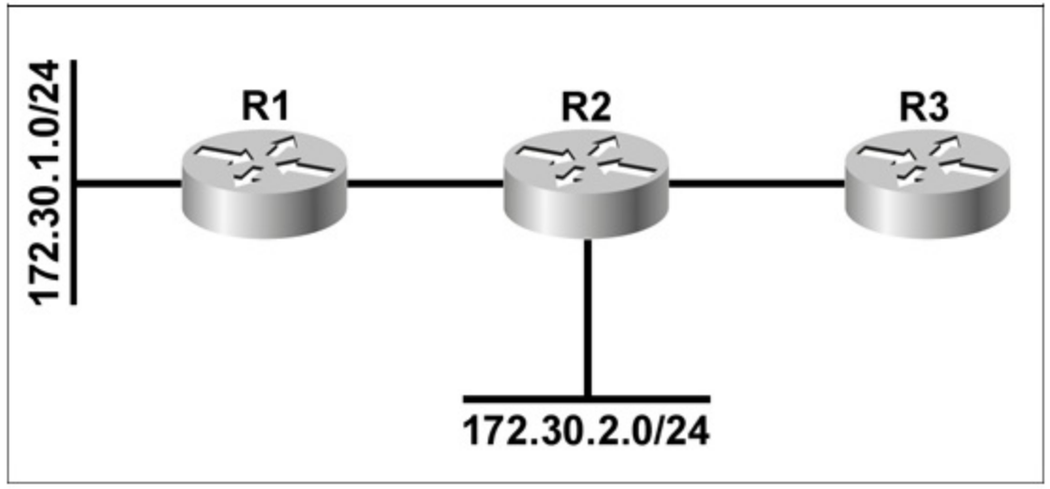
Select all that apply.

100%

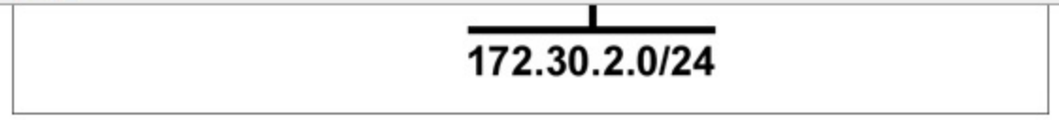
Item 23 of 38 (Exam A, Q410)

Show Answer | Calculator

Refer to the exhibit.
In this network, R1, R2, and R3 are all configured to run EIGRP on all their connected interfaces.
R2 is also configured as an EIGRP stub. At R3, what EIGRP routes are in the local topology table?



A. 172.30.0.0/16
B. 172.30.2.0/24
C. 172.20.1.0/24 and 172.30.2.0/24
D. Not enough information has been provided to know what would be in the topology table at R3.



A. 172.30.0.0/16

B. 172.30.2.0/24

C. 172.20.1.0/24 and 172.30.2.0/24

D. Not enough information has been provided to know what would be in the topology table at R3.

Answer: B
Section: EIGRP

```
R2#show run | b router
<---------------------->
router eigrp 100
 passive-interface FastEthernet4/0
 network 172.30.2.0 0.0.0.255
 network 192.168.1.0 0.0.0.3
 network 192.168.1.4 0.0.0.3
 no auto-summary
 eigrp stub connected summary
 <---------------------->

R3#show ip eigrp topology
IP-EIGRP Topology Table for AS(100)/ID(192.168.1.6)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 192.168.1.0/30, 1 successors, FD is 30720
        via 192.168.1.5 (30720/28160), FastEthernet2/0
P 192.168.1.4/30, 1 successors, FD is 28160
        via Connected, FastEthernet2/0
P 172.30.2.0/24, 1 successors, FD is 30720
        via 192.168.1.5 (30720/28160), FastEthernet2/0
R3#
```

Item 24 of 38 (Exam A, Q425)

Show Answer | Calculator

From which IPv6 address are EIGRPv6 hello messages sourced?

- A. Global unicast
- B. Link local
- C. Site local
- D. Unique local
- E. FF02::A

Item 24 of 38 (Exam A, Q425)

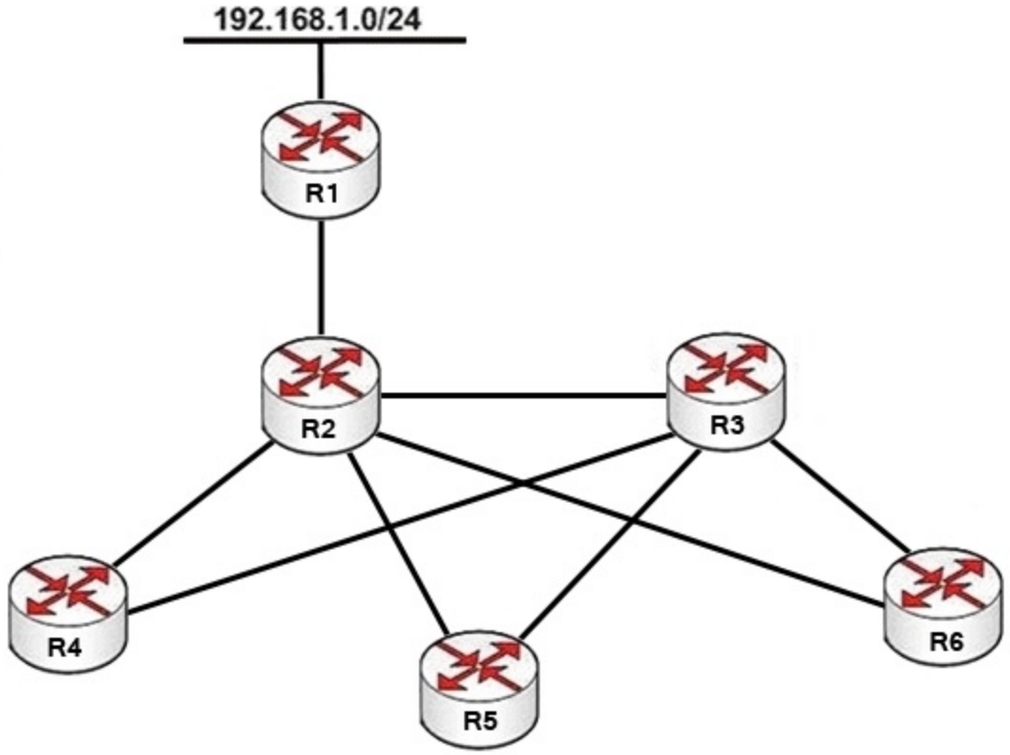
Hide Answer | Calculator

From which IPv6 address are EIGRPv6 hello messages sourced?

A. Global unicast
B. Link local
C. Site local
D. Unique local
E. FF02::A

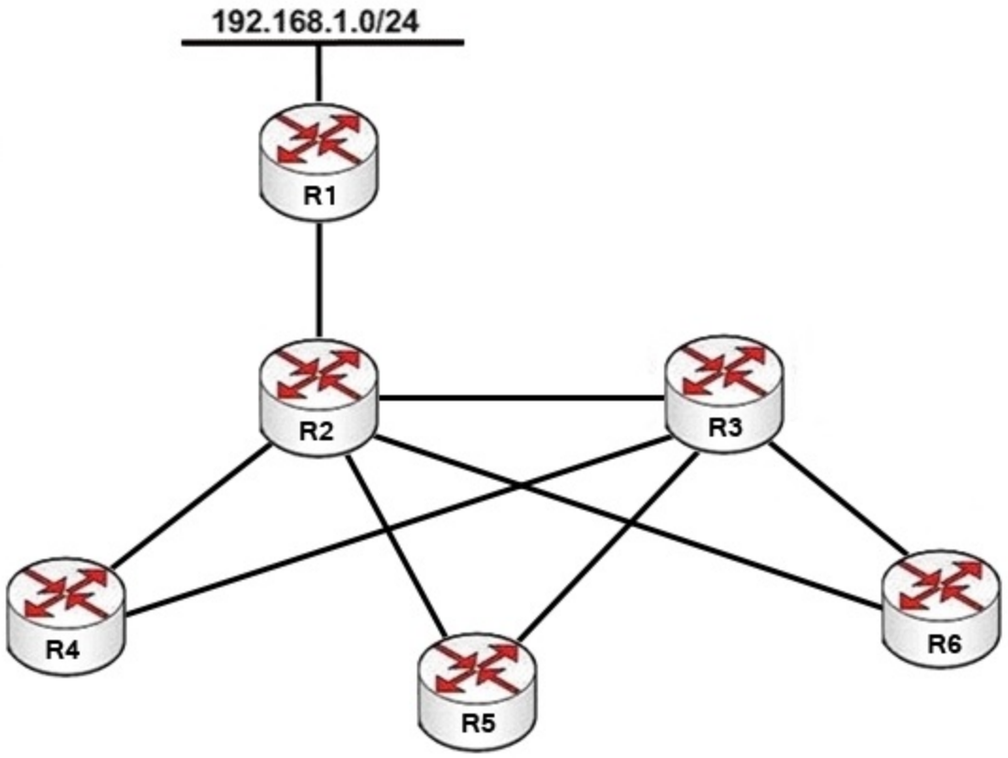
Answer: B
Section: EIGRP

Refer to the exhibit.
In this network, all routers are configured to run EIGRP on all links. If the link between R1 and R2 fails, what is the maximum number of queries R3 will receive for 192.168.1.0/24, assuming that all the packets transmitted during convergence are transmitted once (there are no dropped or retransmitted packets)?



A. R3 will receive up to four queries for 192.168.1.0/24, one each from R2, R4, R5, and R6.
B. R3 will receive up eight queries for 192.168.1.0/24, one from R2, two from R4, three from R5, and four from R6.
C. R3 will receive one query for 192.168.1.0/24, since the remote routers, R4, R5, and R6, are natural stubs in EIGRP.
D. R3 will not receive any queries from R2, because there are no alternate paths for 192.168.1.0/24.

Refer to the exhibit.
In this network, all routers are configured to run EIGRP on all links. If the link between R1 and R2 fails, what is the maximum number of queries R3 will receive for 192.168.1.0/24, assuming that all the packets transmitted during convergence are transmitted once (there are no dropped or retransmitted packets)?



A. R3 will receive up to four queries for 192.168.1.0/24, one each from R2, R4, R5, and R6.
B. R3 will receive up eight queries for 192.168.1.0/24, one from R2, two from R4, three from R5, and four from R6.
C. R3 will receive one query for 192.168.1.0/24, since the remote routers, R4, R5, and R6, are natural stubs in EIGRP.
D. R3 will not receive any queries from R2, because there are no alternate paths for 192.168.1.0/24.

Item 26 of 38 (Exam A, Q358)

Show Answer | Calculator

Refer to the exhibit. What will happen?

```
CE1#show ip eigrp neighbors detail
IP-EIGRP neighbors for process 65000
H   Address                 Interface       Hold Uptime   SRTT   RTO  Q  Seq
                                            (sec)         (ms)       Cnt Num
0   11.1.3.2                Et1/0             12 00:00:44    1  5000  2  63
   Version 12.4/1.2, Retrans: 9, Retries: 9, Waiting for Init Ack
    UPDATE seq 68 ser 0-0 Sent 44148 Init Sequenced
    UPDATE seq 69 ser 2-80 Sequenced
1   11.1.1.2                Et0/0             11 00:09:16   20   200  0  31
   Version 12.4/1.2, Retrans: 0, Retries: 0
```

A. EIGRP keeps on retransmitting the reliable EIGRP packets forever.

B. EIGRP will retransmit the reliable EIGRP packets up to 16 times and then delete the related prefixes.

C. EIGRP will retransmit the reliable EIGRP packets up to 16 times and then reset the EIGRP neighbor 11.1.3.2.

D. The EIGRP neighbor 11.1.3.2 goes down when the hold time reaches 0, which is 12 seconds from now.

Item 26 of 38 (Exam A, Q358)

Hide Answer | Calculator

Refer to the exhibit. What will happen?

```
CE1#show ip eigrp neighbors detail
IP-EIGRP neighbors for process 65000
H   Address                 Interface       Hold Uptime   SRTT   RTO  Q  Seq
                                            (sec)         (ms)       Cnt Num
0   11.1.3.2                Et1/0             12 00:00:44    1  5000  2  63
   Version 12.4/1.2, Retrans: 9, Retries: 9, Waiting for Init Ack
    UPDATE seq 68 ser 0-0 Sent 44148 Init Sequenced
    UPDATE seq 69 ser 2-80 Sequenced
1   11.1.1.2                Et0/0             11 00:09:16   20   200  0  31
   Version 12.4/1.2, Retrans: 0, Retries: 0
```

A. EIGRP keeps on retransmitting the reliable EIGRP packets forever.

B. EIGRP will retransmit the reliable EIGRP packets up to 16 times and then delete the related prefixes.

C. EIGRP will retransmit the reliable EIGRP packets up to 16 times and then reset the EIGRP neighbor 11.1.3.2.

D. The EIGRP neighbor 11.1.3.2 goes down when the hold time reaches 0, which is 12 seconds from now.

Answer: C
Section: EIGRP

Item 27 of 38 (Exam A, Q305)

Show Answer | Calculator

Which two of the following are considered valid router IDs for EIGRPv6? (Choose two.)

- A. 0.0.0.1
- B. 0.255.0.1
- C. 2001:DB8::1
- D. 2001:DB8:ABCD:FEEF::1

Select all that apply.

Item 27 of 38 (Exam A, Q305)

Hide Answer | Calculator

Which two of the following are considered valid router IDs for EIGRPv6? (Choose two.)

- A. 0.0.0.1
- B. 0.255.0.1
- C. 2001:DB8::1
- D. 2001:DB8:ABCD:FEEF::1

Answer: AB
Section: EIGRP

Select all that apply.

100%

Refer to the exhibit.
R4 is unable to establish an EIGRP adjacency with R3, the only other router on the Fa0/0 LAN segment, although it is able to ping R3.
An EIGRP debug on R4 does not provide any clues. What might be the cause of the problem?

```
R4#show ip protocols
Routing Protocol is "eigrp 100"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Default networks flagged in outgoing updates
  Default networks accepted from incoming updates
  EIGRP metric weight K1=1, K2=0, K3=1, K4=0, K5=0
  EIGRP maximum hopcount 100
  EIGRP maximum metric variance 1
  Redistributing: eigrp 100
  EIGRP NSF-aware route hold timer is 240s
  Automatic network summarization is not in effect
  Maximum path: 4
  Routing for Networks:
    209.165.202.128/27
  Passive Interface(s):
    FastEthernet0/0
  Routing Information Sources:
    Gateway         Distance      Last Update
  Distance: internal 90 external 170

R4#ping 209.165.202.139
Sending 5, 100-byte ICMP Echos to 209.165.202.139, timeout is 2 seconds:
!!!!!
```

```
R3#show ip protocols
Routing Protocol is "eigrp 100"
  Outgoing update filter list for all interfaces not set
  Incoming update filter list for all interfaces not set
  Default networks flagged in outgoing updates
  Default networks accepted from incoming updates
  EIGRP metric weight K1=1, K2=0, K3=1, K4=0, K5=0
  EIGRP maximum hopcount 100
  EIGRP maximum metric variance 1
  Redistributing: static, eigrp 100
  EIGRP NSF-aware route hold timer is 240s
  Automatic network summarization is not in effect
  Maximum path: 4
  Routing for Networks:
    209.165.200.224/28
    209.165.202.128/28
  Routing Information Sources:
    Gateway         Distance      Last Update
    209.165.200.242       90      14:09:12
  Distance: internal 90 external 170
```

- A. The passive interface has disabled the transmission of EIGRP multicast hello packets.
- B. EIGRP on R4 should be routing to network 209.165.202.128/28.
- C. The designated router/backup designated router (DR/BDR) selection requires that at least three routers are on a LAN.
- D. The routing metrics on R4 and R3 are different.

Item 28 of 38 (Exam A, Q338)

Hide Answer | Calculator

Refer to the exhibit.
R4 is unable to establish an EIGRP adjacency with R3, the only other router on the Fa0/0 LAN segment, although it is able to ping R3.
An EIGRP debug on R4 does not provide any clues. What might be the cause of the problem?

```
R4#show ip protocols
Routing Protocol is "eigrp 100"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Default networks flagged in outgoing updates
  Default networks accepted from incoming updates
  EIGRP metric weight K1=1, K2=0, K3=1, K4=0, K5=0
  EIGRP maximum hopcount 100
  EIGRP maximum metric variance 1
  Redistributing: eigrp 100
  EIGRP NSF-aware route hold timer is 240s
  Automatic network summarization is not in effect
  Maximum path: 4
  Routing for Networks:
    209.165.202.128/27
  Passive Interface(s):
    FastEthernet0/0
  Routing Information Sources:
    Gateway         Distance      Last Update
  Distance: internal 90 external 170

R4#ping 209.165.202.139
Sending 5, 100-byte ICMP Echos to 209.165.202.139, timeout is 2 seconds:
!!!!!
```

```
R3#show ip protocols
Routing Protocol is "eigrp 100"
  Outgoing update filter list for all interfaces not set
  Incoming update filter list for all interfaces not set
  Default networks flagged in outgoing updates
  Default networks accepted from incoming updates
  EIGRP metric weight K1=1, K2=0, K3=1, K4=0, K5=0
  EIGRP maximum hopcount 100
  EIGRP maximum metric variance 1
  Redistributing: static, eigrp 100
  EIGRP NSF-aware route hold timer is 240s
  Automatic network summarization is not in effect
  Maximum path: 4
  Routing for Networks:
    209.165.200.224/28
    209.165.202.128/28
  Routing Information Sources:
    Gateway         Distance      Last Update
    209.165.200.242       90      14:09:12
  Distance: internal 90 external 170
```

- A. The passive interface has disabled the transmission of EIGRP multicast hello packets.
- B. EIGRP on R4 should be routing to network 209.165.202.128/28.
- C. The designated router/backup designated router (DR/BDR) selection requires that at least three routers are on a LAN.
- D. The routing metrics on R4 and R3 are different.

Answer: A

Select the best choice.

100%

Previous | Next | Review | Pause | Save Session | End Exam

Item 29 of 38 (Exam A, Q30)

Show Answer | Calculator

A new Backup Connection is being deployed on a remote site router. the stability of the connection has been a concern. in order to provide more information to EIGRP Regarding this interface,
You wish to incorporate the "Reliability" cost metric in the EIGRP Calculation with the command

metric weights 1 0 1 0 1.

What impact will this modification on the remote site router have for other existing EIGRP neighborships from the same EIGRP Domain?

- A. Existing Neighbors will immediately begin using the new metric.
- B. Existing Neighbors will use the new metric after clearing the EIGRP Neighbors.
- C. Existing Neighbors will resync, maintaining the neighbor relationship
- D. All ecisting neighbor relationships will go down

Item 29 of 38 (Exam A, Q30)

Hide Answer | Calculator

A new Backup Connection is being deployed on a remote site router. the stability of the connection has been a concern. in order to provide more information to EIGRP Regarding this interface,
You wish to incorporate the "Reliability" cost metric in the EIGRP Calculation with the command

metric weights 1 0 1 0 1.

What impact will this modification on the remote site router have for other existing EIGRP neighborships from the same EIGRP Domain?

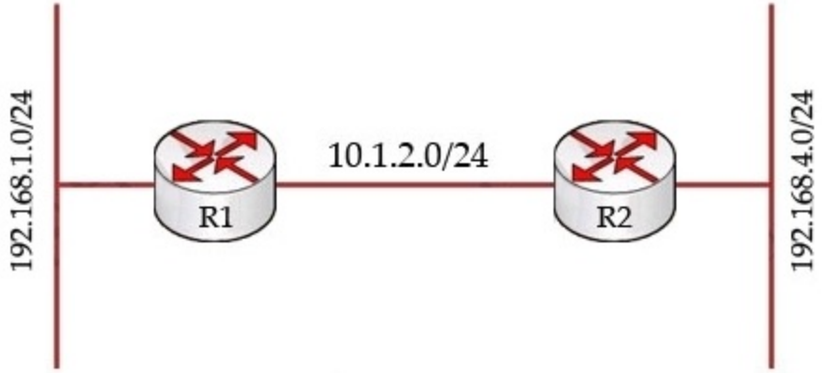
A. Existing Neighbors will immediately begin using the new metric.
B. Existing Neighbors will use the new metric after clearing the EIGRP Neighbors.
C. Existing Neighbors will resync, maintaining the neighbor relationship
D. All ecisting neighbor relationships will go down

Answer: D
Section: EIGRP

Item 30 of 38 (Exam A, Q106)

Show Answer | Calculator

Refer to the exhibit.
In this network, R1 has been configured to advertise a summary route, 192.168.0.0/22, to R2. R2 has been configured to advertise a summary route, 192.168.0.0/21, to R1.
Both routers have been configured to remove the discard route (the route to null created when a summary route is configured) by setting the administrative distance of the discard route to 255.
What will happen if R1 receives a packet destined to 192.168.3.1?



- A. The packet will loop between R1 and R2.
- B. It is not possible to set the administrative distance on a summary to 255.
- C. The packet will be forwarded to R2, where it will be routed to null0.
- D. The packet will be dropped by R1, since there is no route to 192.168.3.1.

A. The packet will loop between R1 and R2.

B. It is not possible to set the administrative distance on a summary to 255.

C. The packet will be forwarded to R2, where it will be routed to null0.

D. The packet will be dropped by R1, since there is no route to 192.168.3.1.

Answer: A
Section: EIGRP

Indeed, when you change the administrative distance of the discard route to 255, this prevents the route to be installed in the routing table but this does not prevent the route to be advertised to the other peer!

From the Cisco website:
"You can configure a summary aggregate address for a specified interface. If there are any more specific routes in the routing table, EIGRP will advertise the summary address out the interface with a metric equal to the minimum of all more specific routes"

And don't forget YOU HAVE a directly connected route 192.168.1/24 in R1 and .4/24 in R2.

Then your summary is advertised, and the packet loop between R1 and R2. If you do the test with GNS3, you will see via "show ip eigrp topology" that you FD of your local subnet 192.168.1.0/24 in R1 become the metric of the summary route "192.168.0.0/22 advertise to R2 ! And viceversa. Numerically, an administrative distance is an integer from 0 to 255. In general, the higher the value, the lower the trust rating. An administrative distance of 255 means that the routing information source cannot be trusted at all and should be ignored. http://www.cisco.com/en/US/docs/ios/12_3/iproute/command/reference/ip2_c1g.html A route with an AD of 255 would never be installed in the RIB. It is much better for the router to forward a packet to null0 following the default route than for the router to find out it has no route to destination, drop the packet and probably to send an ICMP unreachable message back to the source of that packet.

https://supportforums.cisco.com/thread/192416
You should not use the ip summary-address eigrp summarization command to generate the default route (0.0.0.0) from an interface. This causes the creation of an EIGRP summary default route to the null 0 interface with an administrative distance of 5. The low administrative distance of this default route can cause this route to displace default routes learned from other neighbors from the routing table. If the default route learned from the neighbors is displaced by the summary default route, or if the summary route is the only default route present, all traffic destined for the default route will not leave the router, instead, this traffic will be sent to the null 0 interface where it is dropped.

http://www.cisco.com/en/US/docs/ios/12_0/np1/configuration/guide/1ceigrp.html#wp4937

Item 31 of 38 (Exam A, Q171)

Show Answer | Calculator

You add the following commands into a routed topology:

router eigrp 1 variance 3 traffic-share min across-interfaces

Users now complain about voice quality in your VoIP system. What should be done?

A. Add the command: router eigrp 1 traffic-share voice interface fast 0/0.
B. Reconfigure EIGRP to recognize voice packets.
C. Remove the variance from the configuration.
D. Reconfigure the VoIP system to use RTP sequence number headers.
E. Use an H.323 gatekeeper for your VoIP system to negotiate an H.245 uneven packet buffer.
F. Reconfigure EIGRP to version 2.

Item 31 of 38 (Exam A, Q171)

Hide Answer | Calculator

You add the following commands into a routed topology:

router eigrp 1 variance 3 traffic-share min across-interfaces

Users now complain about voice quality in your VoIP system. What should be done?

A. Add the command: router eigrp 1 traffic-share voice interface fast 0/0.
B. Reconfigure EIGRP to recognize voice packets.
C. Remove the variance from the configuration.
D. Reconfigure the VoIP system to use RTP sequence number headers.
E. Use an H.323 gatekeeper for your VoIP system to negotiate an H.245 uneven packet buffer.
F. Reconfigure EIGRP to version 2.

Answer: C
Section: EIGRP

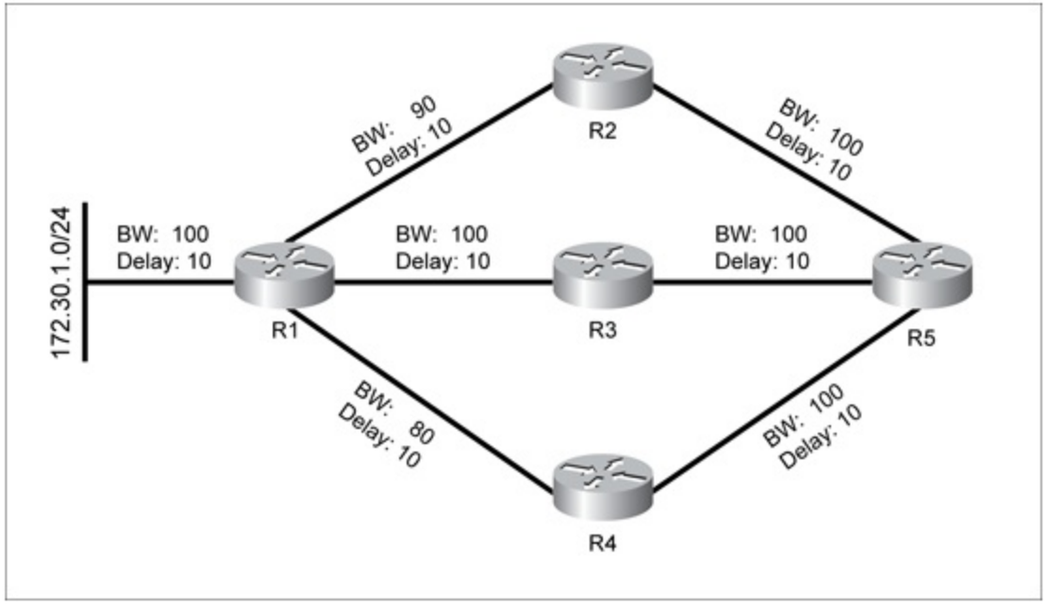
Traffic-share min command causes EIGRP to divide traffic only among the routes with the best metric. When the traffic-share min command is used with the across-interfaces keyword, an attempt is made to use as many different interfaces as possible to forward traffic to the same destination.
Therefore with the configuration above, EIGRP will only use equal-cost load-balancing feature even when the variance command is used. However, if you use both the traffic-share min command and variance command, even though traffic is sent over the minimum-cost path only, all feasible routes get installed into the routing table, which decreases the convergence times. But the voice quality is still the same so C is not a correct answer.

A. Is not correct as there is no "traffic-share voice ...." command.
B. Is not correct as EIGRP cannot recognize voice packets.
C. Is correct, remove the variance commands because voice was working previously before the eigrp command was applied this suggests that you will need to tweak the EIGRP as opposed to going and changing the voice configurations which are already functional
D. Is non-applicable as the Voice quality was impacted after the "traffic-share min" command was configured
E. Is non-applicable as the Voice quality was impacted after the "traffic-share min" command was configured
F. Is not correct because EIGRP does not have version 2. Note: EIGRP routing process will install all paths with metric < best_metric * variance into the local routing table. Here metric is the full metric of the alternate path (FD) and best_metric is the metric of the primary path

Item 32 of 38 (Exam A, Q276)

Show Answer | Calculator

Refer to the exhibit.
In this network, which EIGRP neighbor would R5 consider the successor for 172.30.1.0/24?



A. R3 would be the successor for 172.30.1.0/24 at R5.
B. R2 would be the successor for 172.30.1.0/24 at R5.
C. R4 would be the successor for 172.30.1.0/24 at R5.
D. Not enough information has been given to determine which EIGRP neighbor would be the successor at R5 for 172.30.1.0/24.

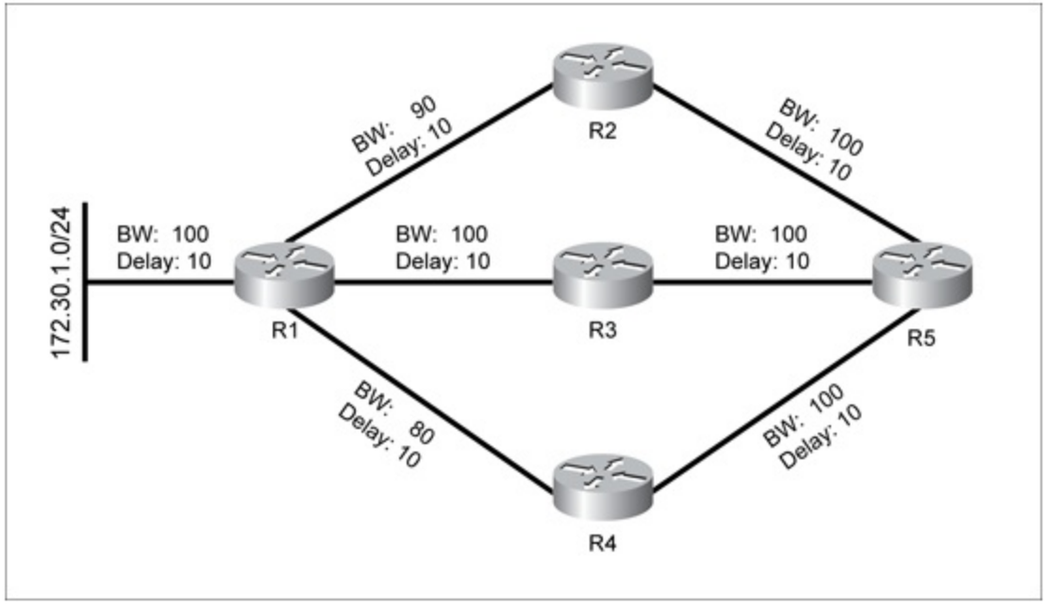
Select the best choice.

100%

Item 32 of 38 (Exam A, Q276)

Hide Answer | Calculator

Refer to the exhibit.
In this network, which EIGRP neighbor would R5 consider the successor for 172.30.1.0/24?



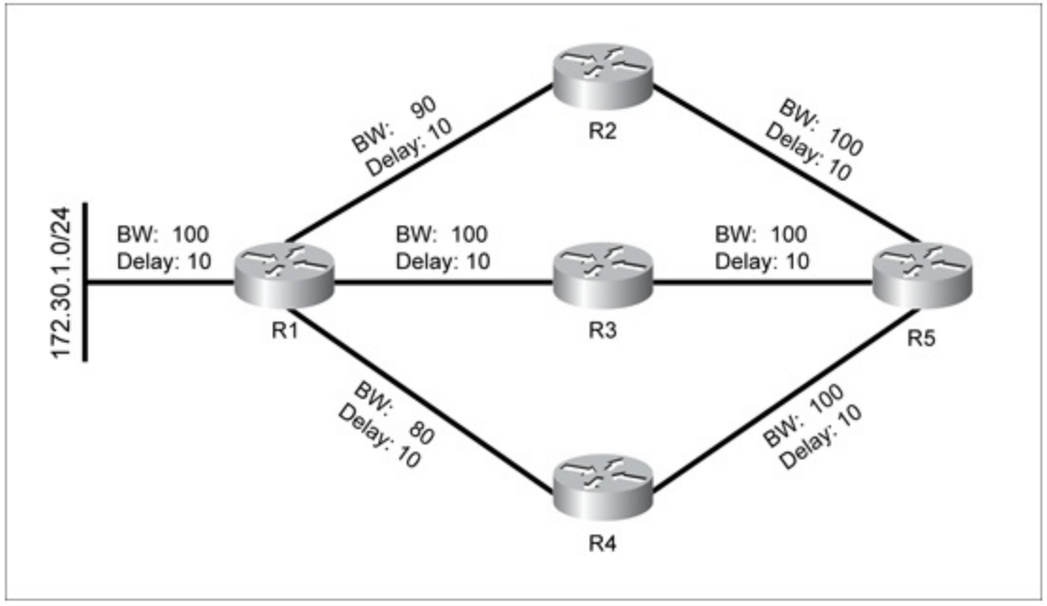
A. R3 would be the successor for 172.30.1.0/24 at R5.
B. R2 would be the successor for 172.30.1.0/24 at R5.
C. R4 would be the successor for 172.30.1.0/24 at R5.
D. Not enough information has been given to determine which EIGRP neighbor would be the successor at R5 for 172.30.1.0/24.

Answer: A
Section: EIGRP

Item 33 of 38 (Exam A, Q284)

Show Answer | Calculator

Refer to the exhibit.
The network administrator for this network is running EIGRP and would like to change the path R5 uses to reach 172.30.1.0/24 to R4.
How could the network administrator to achieve this goal?



A. Change the bandwidth on the link between R2 and R5 to 70, and change the bandwidth on the link between R3 and R5 to 70.
B. Change the bandwidth on the link between R4 and R5 to 110.
C. Change the bandwidth on the link between R3 and R5 to 70.
D. Do nothing; the best path to 172.30.1.0/24 from R5 is already through R4.

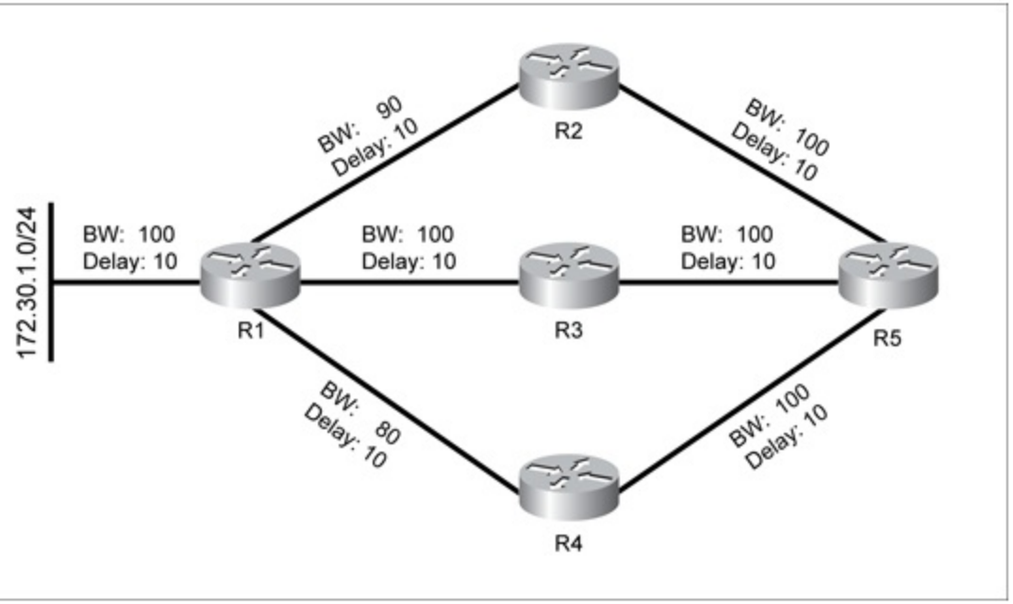
Select the best choice.

100%

Item 33 of 38 (Exam A, Q284)

Hide Answer | Calculator

Refer to the exhibit.
The network administrator for this network is running EIGRP and would like to change the path R5 uses to reach 172.30.1.0/24 to R4.
How could the network administrator to achieve this goal?



A. Change the bandwidth on the link between R2 and R5 to 70, and change the bandwidth on the link between R3 and R5 to 70.
B. Change the bandwidth on the link between R4 and R5 to 110.
C. Change the bandwidth on the link between R3 and R5 to 70.
D. Do nothing; the best path to 172.30.1.0/24 from R5 is already through R4.

Answer: A
Section: EIGRP

Delay = all equal

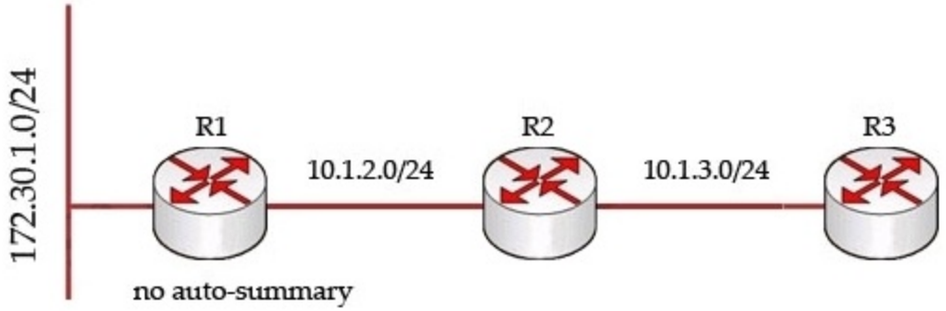
Select the best choice.

100%

Item 34 of 38 (Exam A, Q107)

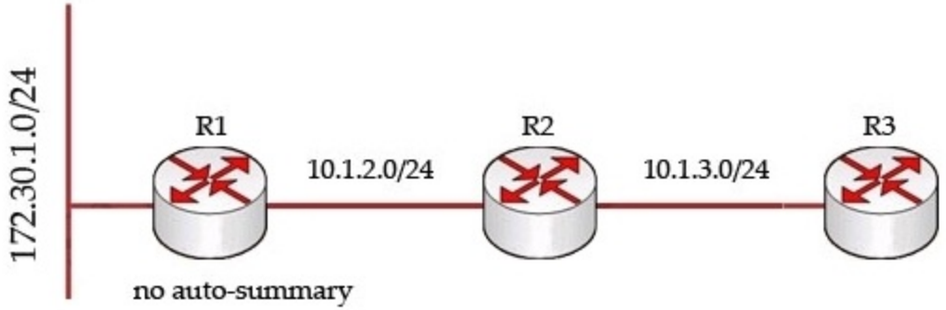
Show Answer | Calculator

Refer to the exhibit. In this network, R1 is configured not to perform autosummarization within EIGRP.
What routes will R3 learn from R2 through EIGRP?



- A. 172.30.1.0/24 and 10.1.2.0/24; EIGRP only performs autosummarization at the edge between two major networks.
- B. 172.30.0.0/16 and 10.1.2.0/24; R2 will perform autosummarization, although R1 will not.
- C. Since R2 is configured without autosummarization, it will not propagate the 172.30.1.0/24 route.
- D. 172.30.0.0/8 and 10.0.0.0/8.

Refer to the exhibit. In this network, R1 is configured not to perform autosummarization within EIGRP.
What routes will R3 learn from R2 through EIGRP?



A. 172.30.1.0/24 and 10.1.2.0/24; EIGRP only performs autosummarization at the edge between two major networks.

B. 172.30.0.0/16 and 10.1.2.0/24; R2 will perform autosummarization, although R1 will not.

C. Since R2 is configured without autosummarization, it will not propagate the 172.30.1.0/24 route.

D. 172.30.0.0/8 and 10.0.0.0/8.

Answer: A
Section: EIGRP

Explanation:
R1 is not configured for auto-summary but R2 is configured for auto-summary as auto-summary is enabled by default.
Therefore although 172.30.1.0 is not summarized by R1 it will be summarized by R2 when R2 advertises this route to R3.
However, both of R2's interfaces are on the 10.x.x.x network and so is R3's single interface. As auto summary is performed based on classful network boundaries R2 will advertise the classless network addresses of both interfaces to R3.
Auto-Summarization
EIGRP performs an auto-summarization each time it crosses a border between two different major networks.
For example, in Figure 13, Router Two advertises only the 10.0.0.0/8 network to Router One, because the interface Router Two uses to reach Router One is in a different major network.

Reference
http://www.cisco.com/en/US/tech/tk365/technologies_white_paper09186a0080094cb7.shtml#summarization

Item 35 of 38 (Exam A, Q155)

Show Answer | Calculator

You are using IPv6, and would like to configure EIGRPv3. Which three of these correctly describe how you can perform this configuration? (Choose three.)

- A. EIGRP for IPv6 is directly configured on the interfaces over which it runs.
- B. EIGRP for IPv6 is not configured on the interfaces over which it runs, but if a user uses passive-interface configuration, EIGRP for IPv6 needs to be configured on the interface that is made passive.
- C. There is a network statement configuration in EIGRP for IPv6, the same as for IPv4.
- D. There is no network statement configuration in EIGRP for IPv6.
- E. When a user uses a passive-interface configuration, EIGRP for IPv6 does not need to be configured on the interface that is made passive.
- F. When a user uses a non-passive-interface configuration, EIGRP for IPv6 does not need to be configured on the interface that is made passive

Select all that apply.

100%

Item 35 of 38 (Exam A, Q155)

Hide Answer | Calculator

You are using IPv6, and would like to configure EIGRPv3. Which three of these correctly describe how you can perform this configuration? (Choose three.)

- A. EIGRP for IPv6 is directly configured on the interfaces over which it runs.
- B. EIGRP for IPv6 is not configured on the interfaces over which it runs, but if a user uses passive-interface configuration, EIGRP for IPv6 needs to be configured on the interface that is made passive.
- C. There is a network statement configuration in EIGRP for IPv6, the same as for IPv4.
- D. There is no network statement configuration in EIGRP for IPv6.
- E. When a user uses a passive-interface configuration, EIGRP for IPv6 does not need to be configured on the interface that is made passive.
- F. When a user uses a non-passive-interface configuration, EIGRP for IPv6 does not need to be configured on the interface that is made passive

Answer: ADE
Section: EIGRP

Select all that apply.

Refer to the exhibit.

```
R5#
!
ipv6 unicast-routing
!
interface Loopback0
 ip address 10.10.5.5 255.255.255.0
 ipv6 address 2001:DB8:5::5/128
 ipv6 enable
 ipv6 eigrp 56
!
interface GigabitEthernet0/0
 ip address 172.16.56.5 255.255.255.0
 ipv6 address 2001:DB8:A00:1::1/64
 ipv6 enable
 ipv6 eigrp 56
!
```

```
R6#
!
ipv6 unicast-routing
!
interface Loopback0
 ip address 10.10.6.6 255.255.255.0
 ipv6 address 2001:DB8:6::6/128
 ipv6 enable
 ipv6 eigrp 56
!
interface GigabitEthernet0/0
 ip address 172.16.56.6 255.255.255.0
 ipv6 address 2001:DB8:A00:1::2/64
 ipv6 enable
 ipv6 eigrp 56
!
```

```
R5#ping ipv6 2001:DB8:6::6
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 2001:DB8:6::6, timeout
is 2 seconds:
.....
Success rate is 0 percent (0/5)
```

You have just configured R5 and R6 to run EIGRPv6 as shown; the IPv6 ping from R5 to R6-loopback 0 is failing. Which statement could be the reason?

A. The loopback interfaces on R5 and R6 must be configured on an EIGRPv6 As number other than 56.

B. The loopback interfaces on R5 and R6 must be configured to EIGRPv6 As number 56.

C. You need to configure the EIGRPv6 router process on both routers.

D. You need to configure the EIGRPv6 router process in at least one of the routers.

E. You should remove the ipv6 eigrp 56 from the loopback interfaces on both routers.

Refer to the exhibit.

```
R5#
!
ipv6 unicast-routing
!
interface Loopback0
 ip address 10.10.5.5 255.255.255.0
 ipv6 address 2001:DB8:5::5/128
 ipv6 enable
 ipv6 eigrp 56
!
interface GigabitEthernet0/0
 ip address 172.16.56.5 255.255.255.0
 ipv6 address 2001:DB8:A00:1::1/64
 ipv6 enable
 ipv6 eigrp 56
!
```

```
R6#
!
ipv6 unicast-routing
!
interface Loopback0
 ip address 10.10.6.6 255.255.255.0
 ipv6 address 2001:DB8:6::6/128
 ipv6 enable
 ipv6 eigrp 56
!
interface GigabitEthernet0/0
 ip address 172.16.56.6 255.255.255.0
 ipv6 address 2001:DB8:A00:1::2/64
 ipv6 enable
 ipv6 eigrp 56
!
```

```
R5#ping ipv6 2001:DB8:6::6
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 2001:DB8:6::6, timeout
is 2 seconds:
.....
Success rate is 0 percent (0/5)
```

You have just configured R5 and R6 to run EIGRPv6 as shown; the IPv6 ping from R5 to R6-loopback 0 is failing. Which statement could be the reason?

A. The loopback interfaces on R5 and R6 must be configured on an EIGRPv6 As number other than 56.

B. The loopback interfaces on R5 and R6 must be configured to EIGRPv6 As number 56.

C. You need to configure the EIGRPv6 router process on both routers.

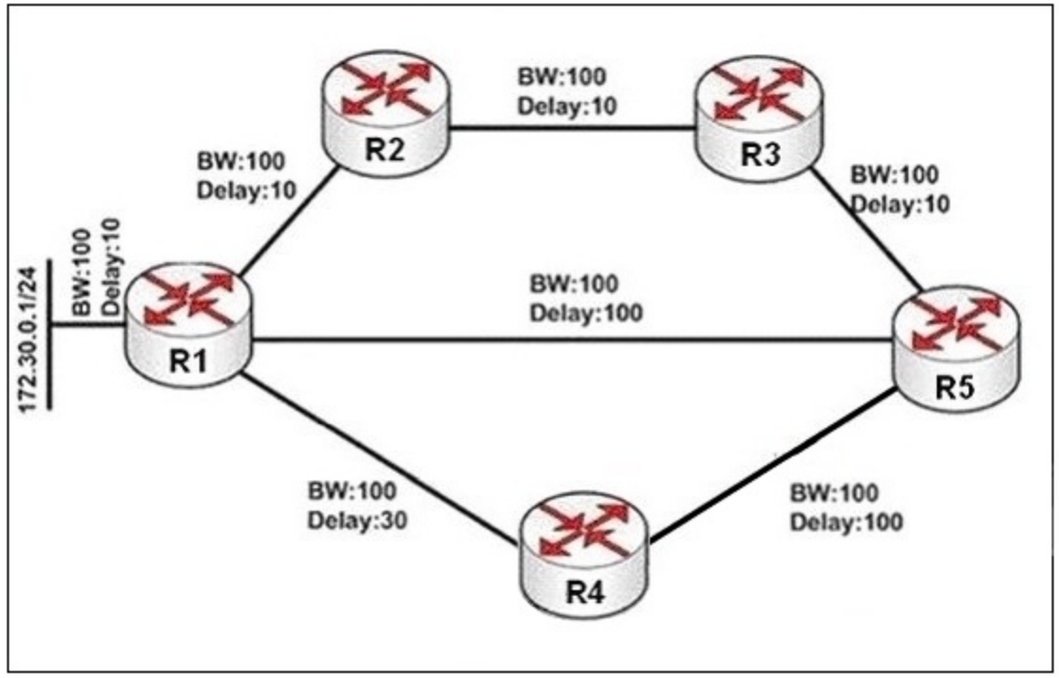
D. You need to configure the EIGRPv6 router process in at least one of the routers.

E. You should remove the ipv6 eigrp 56 from the loopback interfaces on both routers.

Item 37 of 38 (Exam A, Q292)

Show Answer | Calculator

On the basis of the exhibit provided, assuming that EIGRP is the routing protocol, then at R5, what would be the status of each path to 172.30.1.0/24?



A. the path through R3 would be the successor, the path through R1 would be a feasible successor, and the path through R4 would be neither a successor nor a feasible successor

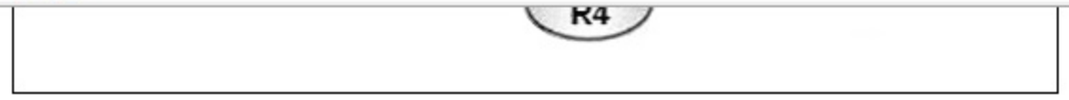
B. the path through R3 would be the successor, and the paths through R1 and R4 would be feasible successors

C. the path through R1 would be the successor, the path through R3 would be a feasible successor, and the path through R4 would be neither a successor nor feasible successor

D. not enough information has been given to figure out what the status of each route would be

Select the best choice.

100%



A. the path through R3 would be the successor, the path through R1 would be a feasible successor, and the path through R4 would be neither a successor nor a feasible successor

B. the path through R3 would be the successor, and the paths through R1 and R4 would be feasible successors

C. the path through R1 would be the successor, the path through R3 would be a feasible successor, and the path through R4 would be neither a successor nor feasible successor

D. not enough information has been given to figure out what the status of each route would be

Answer: A
Section: EIGRP

EIGRP uses a composite metric, meaning it's made up of several smaller metrics:

- Bandwidth (minimum along path)
- Delay (cumulative along path)
- Reliability
- Load
- MTU

Eigrp chooses path with lowest composite metric the metric is based on
Bandwidth- not the actual bandwidth but the invese lowest bandwidth(your bottle neck)
along the path in kbps scaled by 10^7*256
Delay- cumulative delay along the path in ten of microseconds scaled by 256
Load- highest load along the path
relability- lowest relability along the path

METRIC = [k1*bandwidth +(k2*bandwidth)/(256 - load) + k3 * delay]
if k5 is been used not equal to zero
metric = metrix * [k5/(relability+k4)
k1=bandwidth k2 = load k3= delay k4= reachability k5 = mtu

An interesting if we have 2 equal best equal cost routes from same eigrp process we will load balance if we have 2 equal best cost routes from different eigrp process it will select the route from the lowest number AS.
By default it
k1 and 3 are enabled 1 and the rest of the k values are 0 not enabled.

http://cciejournry.blogspot.de/2011/12/i-also-looked-at-eigrp-path-selection.html

Refer to the exhibit. Which statement is correct?

```
CE1#show ip eigrp topology active
IP-EIGRP Topology Table for AS(65000)/ID(11.1.3.1)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply
       r - reply Status, s - sia Status

A 55.55.55.55/32, 1 successors, FD is Inaccessible, tag is 1
    1 replies, active 00:00:43, query-origin: Local origin
        via Redistributed (40256000/0)
      Remaining replies:
         via 11.1.3.2, r, Ethernet1/0
```

A. Router CE1 is waiting for the query for the prefix 55.55.55.55/32 to be acknowledged.

B. Router CE1 is waiting for the reply for the prefix 55.55.55.55/32 to be received.

C. Router CE1 still has to send out a query for the prefix 55.55.55.55/32.

D. Router CE1 has sent out a reply that has not been acknowledged yet.

Item 38 of 38 (Exam A, Q307)

Hide Answer | Calculator

Refer to the exhibit. Which statement is correct?

```
CE1#show ip eigrp topology active
IP-EIGRP Topology Table for AS(65000)/ID(11.1.3.1)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply
       r - reply Status, s - sia Status

A 55.55.55.55/32, 1 successors, FD is Inaccessible, tag is 1
    1 replies, active 00:00:43, query-origin: Local origin
        via Redistributed (40256000/0)
      Remaining replies:
         via 11.1.3.2, r, Ethernet1/0
```

A. Router CE1 is waiting for the query for the prefix 55.55.55.55/32 to be acknowledged.

B. Router CE1 is waiting for the reply for the prefix 55.55.55.55/32 to be received.

C. Router CE1 still has to send out a query for the prefix 55.55.55.55/32.

D. Router CE1 has sent out a reply that has not been acknowledged yet.

Answer: B
Section: EIGRP

Refer to the exhibit.
How will traffic be split between the routers, assuming that there are many hosts on this subnet?

```
R100#show glbp
FastEthernet0/0 - Group 150
  State is Active
  Virtual IP address is 10.1.1.150
  Preemption enabled, min delay 0 sec
  Active is local
  Standby is 10.1.1.101, priority 100 (expires in 8.128 sec)
  Priority 150 (configured)
  Weighting 50 (configured 50), thresholds: lower 1, upper 50
  Load balancing: round-robin
  Group members:
    aabb.cc00.6400 (10.1.1.100) local
    aabb.cc00.6500 (10.1.1.101)
  There are 2 forwarders (1 active)
  Forwarder 1
    State is Active
      1 state change, last state change 00:07:56
    Redirection enabled
    Preemption enabled, min delay 30 sec
    Active is local, weighting 10
  Forwarder 2
    State is Listen
    Preemption enabled, 599.360 sec remaining (maximum 600 sec)
    Time to live: 14399.360 sec (maximum 14400 sec)
    Active is 10.1.1.101 (primary), weighting 30 (expires in 10.432 sec)
```

A. All traffic will be sent to the primary router (10.1.1.100).
B. Traffic will be split equally between the two routers (10.1.1.100 and 10.1.1.101).
C. Traffic will be split 25% (10.1.1.101) / 75% (10.1.1.100) between the two routers.
D. Traffic will be split 75% (10.1.1.101) / 25% (10.1.1.100) between the two routers.

Select the best choice.

How will traffic be split between the routers, assuming that there are many hosts on this subnet?

```
R100#show glbp
FastEthernet0/0 - Group 150
  State is Active
  Virtual IP address is 10.1.1.150
  Preemption enabled, min delay 0 sec
  Active is local
  Standby is 10.1.1.101, priority 100 (expires in 8.128 sec)
  Priority 150 (configured)
  Weighting 50 (configured 50), thresholds: lower 1, upper 50
  Load balancing: round-robin
  Group members:
    aabb.cc00.6400 (10.1.1.100) local
    aabb.cc00.6500 (10.1.1.101)
  There are 2 forwarders (1 active)
  Forwarder 1
    State is Active
      1 state change, last state change 00:07:56
    Redirection enabled
    Preemption enabled, min delay 30 sec
    Active is local, weighting 10
  Forwarder 2
    State is Listen
    Preemption enabled, 599.360 sec remaining (maximum 600 sec)
    Time to live: 14399.360 sec (maximum 14400 sec)
    Active is 10.1.1.101 (primary), weighting 30 (expires in 10.432 sec)
```

A. All traffic will be sent to the primary router (10.1.1.100).

B. Traffic will be split equally between the two routers (10.1.1.100 and 10.1.1.101).

C. Traffic will be split 25% (10.1.1.101) / 75% (10.1.1.100) between the two routers.

D. Traffic will be split 75% (10.1.1.101) / 25% (10.1.1.100) between the two routers.

Item 2 of 38 (Exam A, Q445)

Show Answer | Calculator

Which feature is used to translate several internal addresses to only one or a few external addresses (also referred to as "overload")?

A. Network Address Translation
B. Address Translation Table
C. Overload Address Method
D. Port Address Translation

Item 2 of 38 (Exam A, Q445)

Hide Answer | Calculator

Which feature is used to translate several internal addresses to only one or a few external addresses (also referred to as "overload")?

A. Network Address Translation
B. Address Translation Table
C. Overload Address Method
D. Port Address Translation

Answer: D
Section: IP Routing

Item 3 of 38 (Exam A, Q149)

Show Answer | Calculator

Which of these tables is used by an LSR to perform a forwarding lookup for a packet destined to an address within an RFC 4364 VPN?

- A. CEF
- B. FIB
- C. LFIB
- D. IGP

Item 3 of 38 (Exam A, Q149)

Hide Answer | Calculator

Which of these tables is used by an LSR to perform a forwarding lookup for a packet destined to an address within an RFC 4364 VPN?

- A. CEF
- B. FIB
- C. LFIB
- D. IGP

Answer: C
Section: IP Routing

Item 4 of 38 (Exam A, Q27)

Show Answer | Calculator

Refer to the exhibit. Which option best describes how the virtual MAC address is composed?

```
Router# show standby
Ethernet0/0 - Group 35 (version 2)
  State is Standby
    6 state changes, last state change 00:01:22
  Virtual IP address is 10.1.1.1
  Active virtual MAC address is 0000.0c9f.f023
    Local virtual MAC address is 0000.0c9f.f023 (v2 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 0.688 secs
  Preemption disabled
  Active router is 10.1.1.101, priority 100 (expires in 9.440 sec)
    MAC address is aabb.cc00.6500
  Standby router is local
  Priority 150 (configured 150)
  Group name is "hsrp-Et0/0-25" (default)
```

- A. based on a randomly generated number
- B. based on the burned-in MAC address of the router
- C. based on a number manually configured by the administrator
- D. based on the configured standby group number

Select the best choice.

100%

Item 4 of 38 (Exam A, Q27)

Hide Answer | Calculator

Refer to the exhibit. Which option best describes how the virtual MAC address is composed?

```
Router# show standby
Ethernet0/0 - Group 35 (version 2)
  State is Standby
    6 state changes, last state change 00:01:22
  Virtual IP address is 10.1.1.1
  Active virtual MAC address is 0000.0c9f.f023
    Local virtual MAC address is 0000.0c9f.f023 (v2 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 0.688 secs
  Preemption disabled
  Active router is 10.1.1.101, priority 100 (expires in 9.440 sec)
    MAC address is aabb.cc00.6500
  Standby router is local
  Priority 150 (configured 150)
  Group name is "hsrp-Et0/0-25" (default)
```

A. based on a randomly generated number

B. based on the burned-in MAC address of the router

C. based on a number manually configured by the administrator

D. based on the configured standby group number

Answer: D
Section: IP Routing

Item 5 of 38 (Exam A, Q258)

Show Answer | Calculator

Which two steps below should you perform on the hub router while configuring EIGRP routing over DMVPN (mGRE tunnel)? (Choose two.)

- A. Set the NHRP hold time to match the EIGRP hold time
- B. Add the enable eigrp stub command
- C. Add the disable eigrp as-member split-horizon command
- D. Add the disable eigrp as-member next-hop-self command

Select all that apply.

100%

Item 5 of 38 (Exam A, Q258)

Hide Answer | Calculator

Which two steps below should you perform on the hub router while configuring EIGRP routing over DMVPN (mGRE tunnel)? (Choose two.)

- A. Set the NHRP hold time to match the EIGRP hold time
- B. Add the enable eigrp stub command
- C. Add the disable eigrp as-member split-horizon command
- D. Add the disable eigrp as-member next-hop-self command

Answer: CD
Section: IP Routing

To stop EIGRP from assign hub as the next hop for all routes if you don't disable split horizon on the tunnel interface you will only see the routes the hub itself is responsible for from a spoke router.
When configuring an EIGRP AS you use the tunnel network id as a network you want to participate on with EIGRP.