A screenshot of a computer

AI-generated content may be incorrect.

Here are **5 isomorphic variations** of the original question, each with a change in name, job title, scenario, and routing protocol, while maintaining the main goal: verifying proper routing protocol configuration.

**1.**

**Question:**  
**Amina is a systems engineer.** She has been assigned to configure **RIP** across a network with **2 routers and 4 subnets**. What command can she use to verify that RIP is operating correctly?

**Answer Choices:**  
A. show ip interface brief  
B. show ip protocols  
C. show version  
D. ping

✅ **Correct Answer: B. show ip protocols**  
**Explanation:** This command displays routing protocol configuration details, including timers and advertised networks.

**2.**

**Question:**  
**Carlos, a junior network technician**, has been asked to verify the configuration of **OSPF** in a topology consisting of **4 routers and 6 subnets**. Which command should he use to confirm that the routing protocol is functioning correctly?

**Answer Choices:**  
A. show ip route  
B. show interfaces  
C. show ip ospf  
D. show vlan

✅ **Correct Answer: C. show ip ospf**  
**Explanation:** This command provides details about OSPF operation and configuration, useful for checking if it's running properly.

**3.**

**Question:**  
**Priya is a network support associate** working on a network that uses **EIGRP** and includes **3 routers and 7 subnets**. What command should she use to determine whether the EIGRP process is correctly configured?

**Answer Choices:**  
A. show ip eigrp neighbors  
B. show mac address-table  
C. show arp  
D. traceroute

✅ **Correct Answer: A. show ip eigrp neighbors**  
**Explanation:** This command confirms that EIGRP neighbor relationships are established, which indicates successful configuration.

**4.**

**Question:**  
**Leon, a field network engineer,** is helping deploy a **RIP-based** routing solution across **3 routers and 5 networks**. To verify that RIP is functioning as intended, which command should he use?

**Answer Choices:**  
A. show ip protocols  
B. show interfaces status  
C. show ip rip database  
D. show running-config

✅ **Correct Answer: A. show ip protocols**  
**Explanation:** This command shows routing protocol-specific information including network statements and timers.

**5.**

**Question:**  
**Maya, a cybersecurity analyst**, is double-checking that **OSPF** has been set up correctly in a **network of 5 routers and 8 subnets**. What command will allow her to verify the routing protocol's status?

**Answer Choices:**  
A. show ip ospf neighbor  
B. debug ip routing  
C. show spanning-tree  
D. show ip bgp summary

✅ **Correct Answer: A. show ip ospf neighbor**  
**Explanation:** This command helps confirm OSPF neighbor relationships are formed, indicating proper OSPF operation.

Let me know if you want these in a worksheet, quiz, or slide format!

Here are **5 additional isomorphic variations** of the original question, again with unique names, job roles, network scenarios, and routing protocols (RIP, EIGRP, OSPF), but all focused on the same objective: verifying correct routing protocol configuration.

**6.**

**Question:**  
**Niko, a data center technician,** has implemented **EIGRP** on a small enterprise network containing **4 routers and 9 subnets**. What command can he use to verify that the routers are forming neighbor relationships correctly?

**Answer Choices:**  
A. show interfaces  
B. show ip eigrp topology  
C. show ip eigrp neighbors  
D. show ip interface brief

✅ **Correct Answer: C. show ip eigrp neighbors**  
**Explanation:** This command lists established EIGRP adjacencies, confirming the routers are communicating as intended.

**7.**

**Question:**  
**Fatima, a university network coordinator,** just configured **RIP** on a campus network with **5 routers and 10 subnets**. What command should she use to check if RIP is correctly advertising the networks?

**Answer Choices:**  
A. show ip rip database  
B. show vlan brief  
C. show ip protocols  
D. show ip arp

✅ **Correct Answer: C. show ip protocols**  
**Explanation:** This command shows which networks are being advertised and verifies RIP is running.

**8.**

**Question:**  
**Marcus, a government network specialist,** has configured **OSPF** on a secure network with **6 routers across 3 OSPF areas**. What command should he use to validate that OSPF is functioning correctly?

**Answer Choices:**  
A. show ip ospf neighbor  
B. show startup-config  
C. show ip interface  
D. ping

✅ **Correct Answer: A. show ip ospf neighbor**  
**Explanation:** This command shows OSPF adjacency states, confirming routers are successfully exchanging information.

**9.**

**Question:**  
**Jade, a network operations apprentice,** set up **EIGRP** on a testbed that contains **3 routers and 6 subnets**. What command can she use to confirm EIGRP has learned the correct routes?

**Answer Choices:**  
A. show ip eigrp topology  
B. show ip route  
C. show ip protocols  
D. show cdp neighbors

✅ **Correct Answer: A. show ip eigrp topology**  
**Explanation:** This command displays the EIGRP topology table, verifying that routes are being discovered and maintained.

**10.**

**Question:**  
**Omar, a senior IT technician at a hospital,** is reviewing a **RIP configuration** applied to a fault-tolerant network with **4 routers and multiple LAN segments**. Which command will help him verify if RIP updates are occurring as expected?

**Answer Choices:**  
A. show ip protocols  
B. show ip route static  
C. debug ip rip  
D. show version

✅ **Correct Answer: A. show ip protocols**  
**Explanation:** This command provides information on active RIP processes, update intervals, and advertised networks.

Would you like these added to a quiz format or turned into a classroom worksheet?