# CCNA 640-802 Bible ? Network Device

1. Which of the following is true regarding the use of switches and hubs for network connectivity? A: Switches take less time to process frames than hubs take. B: Switches do not forward broadcasts. C: Hubs can filter frames. D: Using hubs can increase the amount of bandwidth available to hosts. E: Switches increase the number of collision domains in the network. Correct Answers: E Explanation: The biggest benefit of using switches instead of hubs in your internetwork is that each switch port is actually its own collision domain. (Conversely, a hub creates one large collision domain.) But even armed with a switch, you still can't break up broadcast domains. Neither switches nor bridges will do that. They'll typically simply forward all broadcasts instead. Switch creates the collision domain per port, so we can say switch increase the number of collision domains.   2. When comparing and contrasting the similarities and differences between bridges and switches, which of the following are valid statements? A. Bridges are faster than switches because they have fewer ports. B. A switch is a multiport bridge. C. Bridges and switches learn MAC addresses by examining the source MAC address of each frame received. D. A bridge will forward a broadcast but a switch will not. E. Bridges and switches increase the size of a collision domain. Answer: B, C **Explanation:** Both bridges and switches build the bridge table by listening to incoming frames and examining the source MAC address in the frame. Switches are multiport bridges that allow you to create multiple broadcast domains. Each broadcast domain is like a distinct virtual bridge within a switch.   3. What functions do routers perform in a network? (Choose two.) A:packet switching B:access layer security C:path selection D: VLAN membership assignment E:bridging between LAN segments F:microsegmentation of broadcast domains Correct Answers: A, C Explanation: The main function of a router is to connect different, separated networks together. In doing so, switching packets from one network to another is a primary function, along with providing for communication between networks. As an additional feature, routers are capable of providing filtering on a network address and application port level, so choice C is also correct.   4. Which of the following describes the roles of devices in a WAN? (Choose three.) A:A CSU/DSU terminates a digital local loop. B:A modem terminates a digital local loop. C:A CSU/DSU terminates an analog local loop. D:A modem terminates an analog local loop. E:A router is commonly considered a DTE device. F:A router is commonly considered a DCE device. Correct Answers: A, D, E Explanation: Layer 2 switching is considered hardware-based bridging because it uses specialized hardware called an application-specific integrated circuit (ASIC). ASICs can run up to gigabit speeds with very low latency rates. Switches usually have higher port number then bridge. Generally bridges have two ports. Both operates on Data link layer.   5. Refer to the exhibit. What two results would occur if the hub were to be replaced with a switch that is configured with one Ethernet VLAN ? (Choose two.)
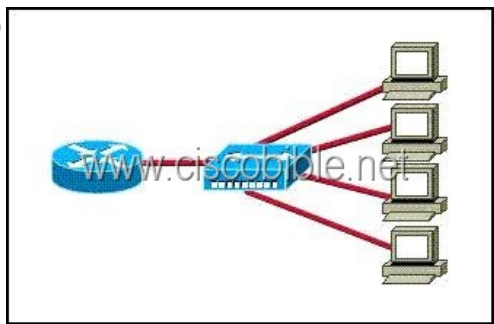
A:The number of collision domains would remain the same. B:The number of collision domains would decrease. C:The number of collision domains would increase. D:The number of broadcast domains would remain the same. E:The number of broadcast domains would decrease. F:The number of broadcast domains would increase. Correct Answers: C, D **Explanation: Collision Domain:** A group of Ethernet or Fast Ethernet devices in a CSMA/CD LAN that are connected by repeaters and compete for access on the network. Only one device in the collision domain may transmit at any one time, and the other devices in the domain listen to the network in order to avoid data collisions. A collision domain is sometimes referred to as an Ethernet segment. **Broadcast Domain:** Broadcasting sends a message to everyone on the local network (subnet). An example for Broadcasting would be DHCP Request from a Client PC. The Client is asking for a IP Address, but the client does not know how to reach the DHCP Server. So the client sends a DHCP Discover packet to EVERY PC in the local subnet (Broadcast). But only the DHCP Server will answer to the Request. How to count them? **Broadcast Domain:** No matter how many hosts or devices are connected together, if they are connected with a repeater, hub, switch or bridge, all these devices are in ONE Broadcast domain (assuming a single VLAN). A Router is used to separate Broadcast-Domains (we could also call them Subnets - or call them VLANs). So, if a router stands between all these devices, we have TWO broadcast domains. **Collision Domain:** Each connection from a single PC to a Layer 2

switch is ONE Collision domain. For example, if 5 PCs are connected with separate cables to a switch, we have 5 Collision domains. If this switch is connected to another switch or a router, we have one collision domain more. If 5 Devices are connected to a Hub, this is ONE Collision Domain. Each device that is connected to a Layer 1 device (repeater, hub) will reside in ONE single collision domain.