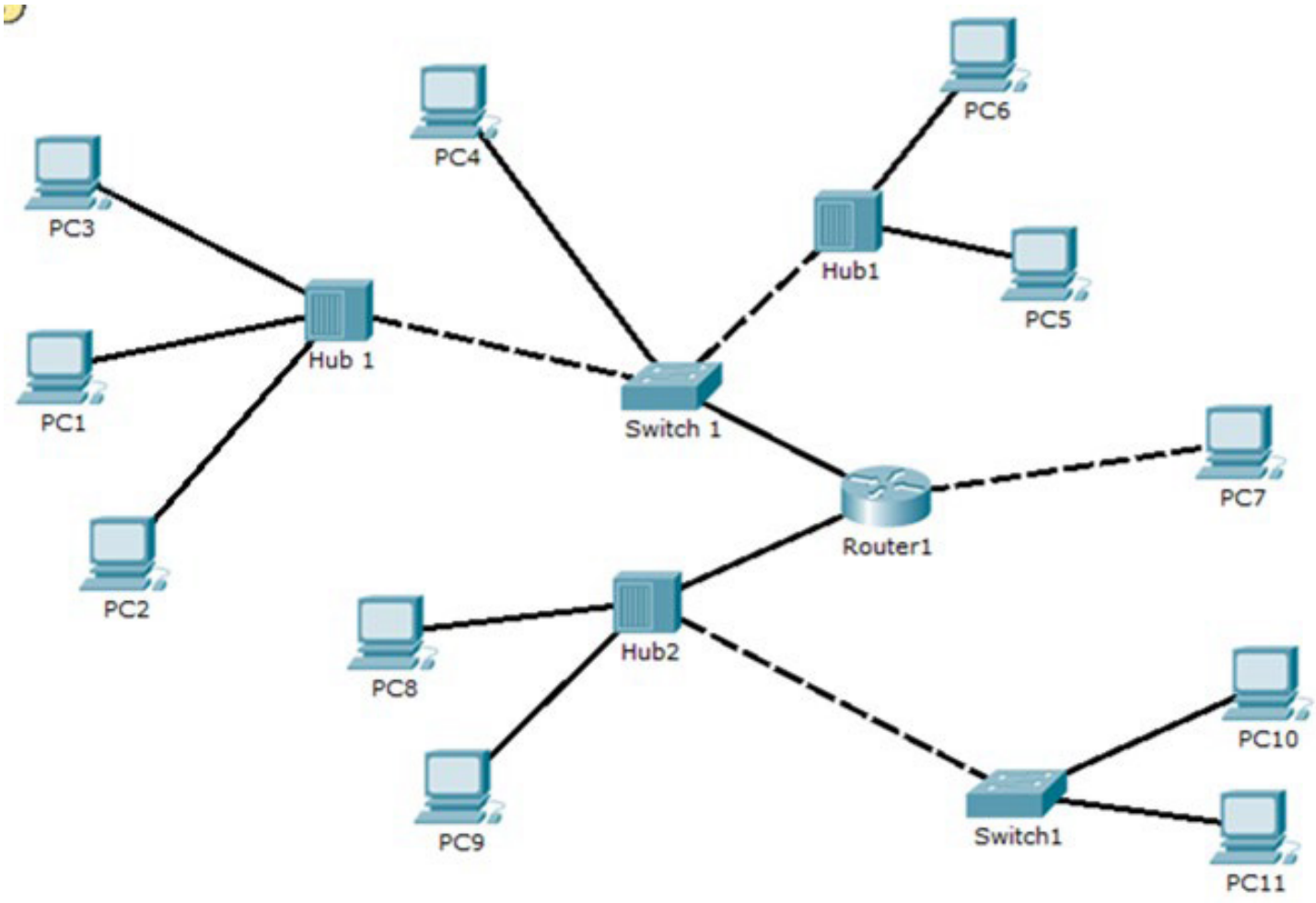
Activity 5.2.1: Network Puzzles

Name: _____ Date: _____ Class: _____

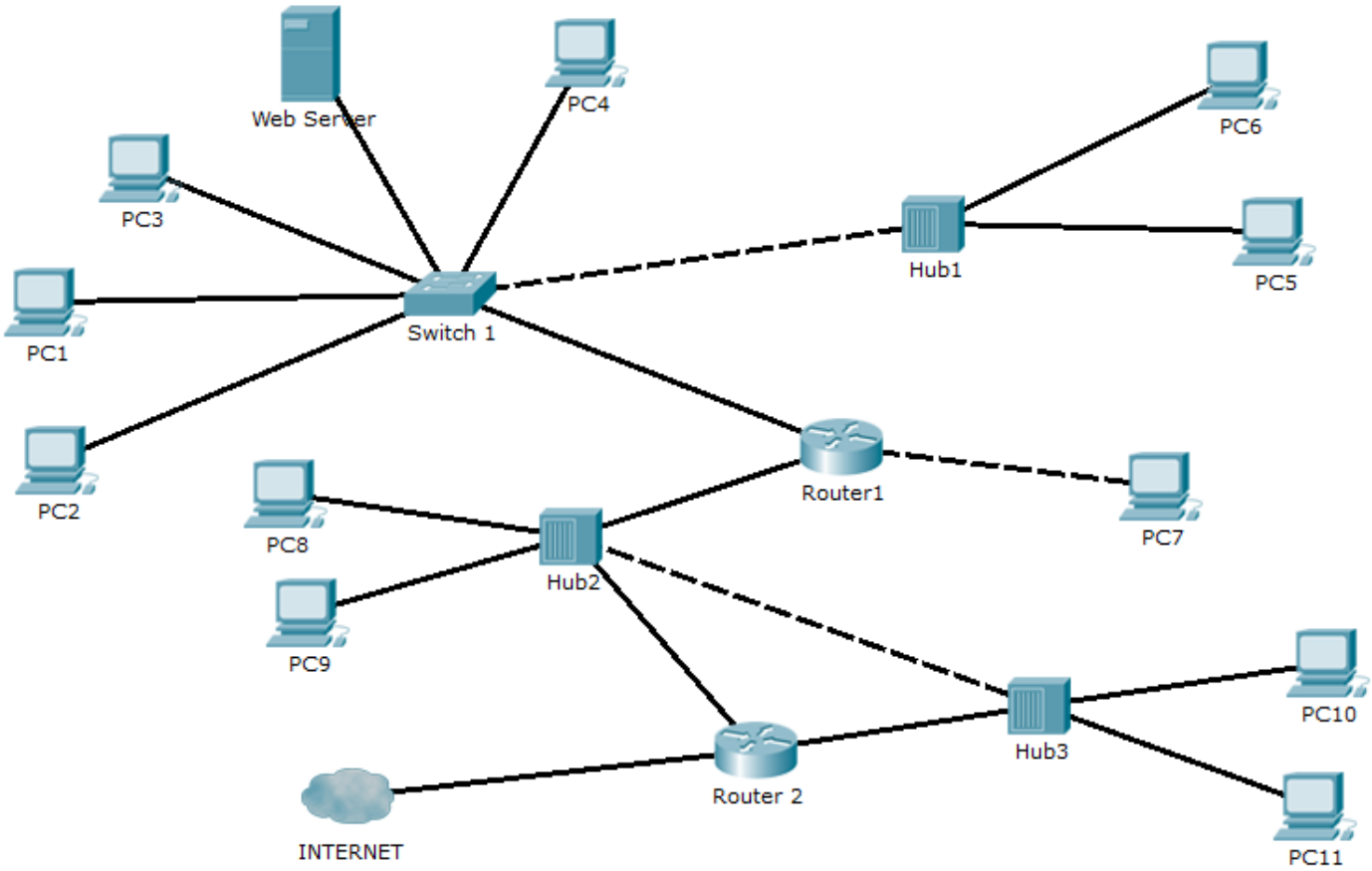
Instructions: On the next few pages, there are diagrams of networks, with instructions as to packet deliveries. For each puzzle you must keep in mind the following rules about Network devices:

1. **Hub** - Sends the packet out to every port no matter what.
2. **Switch** - Sends the packet JUST to the port that is on the path to the destination device EXCEPT broadcast packets, which go out to all ports (because they are actually addressed to everyone!).
3. **Router** - sends the packet JUST to the port that is on the path to the destination device AND it will STOP broadcast packets (won't deliver them at all!)

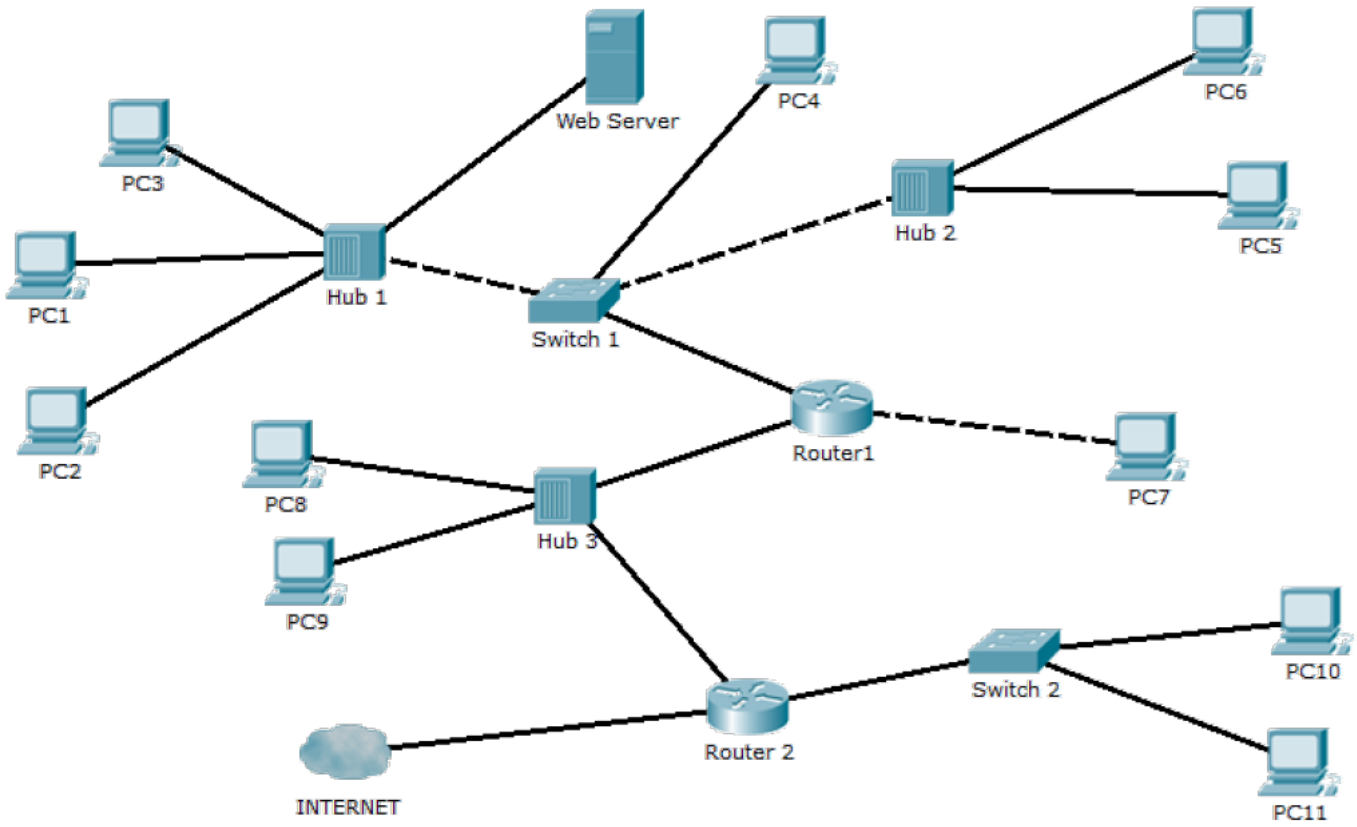
Network Packet Delivery - Puzzle #1 - PC 1 has sent a PING message to PC 10. Circle the Computers (PCs) that will receive the message.



Network Packet Delivery - Puzzle #2 - A broadcast message has gone out from PC 9. Circle which computers (PCs) will recieve the message



Network Packet Delivery - Puzzle #3 - A request message has come in from the Internet to the Web Server.. In the table below, identify which devices will receive the message and to whom they pass the message.



Device	Message Received?	List which devices are passed to from this device
Router 2		
Switch 2		
Hub 3		
Router 1		
Switch 1		
Hub 1		
Hub 2		

Network Packet Delivery - Puzzle #4 - You are the network admin. The CEO works at computer A and the President works at computer B. They have complained that there are delays and packet drops when they send data to each other. You believe this problem is the result of a PC in the network that is sending out burst of packets. The PC could be infected with a virus or have corrupted NIC drivers.

You decide to install sniffer software to intercept the data between computer A and computer B.

CIRCLE all the computers on the network on which it would make sense to install a sniffer - *except*, of course the A and B machines because the CEO and President offices are locked.
Tip: Sniffers can only "listen" to data that is broadcast.