

Part A

Q.1

192.168.122.79 and 192.168.122.108

Q.2

192.168.122.1 for both, which is the ip address of the NAT.

Q.3

Yes

Part B:

Q.1:

Discovery (broadcast):	Src (Client):	IP: 0.0.0.0	ETH: 0e:d8:a7:70:97:15
	Dst (Server):	IP 255.255.255.255	ETH: ff:ff:ff:ff:ff:ff
Offer (unicast):	Src (Server):	IP: 192.168.122.1	ETH: 52:54:00:79:0c:75
	Dst (Client):	IP 192.168.122.204	ETH: 0e:d8:a7:70:97:15
Request (broadcast):	Src (Client):	IP: 0.0.0.0	ETH: 0e:d8:a7:70:97:15
	Dst (Server):	IP 255.255.255.255	ETH: ff:ff:ff:ff:ff:ff
Ack (unicast):	Src (Server):	IP: 192.168.122.1	ETH: 52:54:00:79:0c:75
	Dst (Client):	IP 192.168.122.204	ETH: 0e:d8:a7:70:97:15

Q.2: 1 hour

Q.3: Next server IP address: 192.168.122.1. There's also a field called Option (3) Router, which contains Router: 192.168.122.1.

Q.4: DHCP is in the application layer of the IP suite. It is implemented using UDP, which is in the transport layer of the IP suite.