Background Work & Explanation

TASK:

Design a network in CISCO packet tracer to connect ACCOUNTS and DELIVERY departments through the following:

1: Each Department should contain 2 PCs
2: Appropriate number of switches and routers should be used in the network.
3: Using the given network address 192.168.40.0, all interfaces should be configured with appropriate IP addresses, subnet mask and gateways.
4: All devices in the network should be connected using appropriate cables.
5: Test the connectivity between accounts and the delivery department.

Network address = 192.168.40.0

Number of Subnets = 2

2^n = number of subnets (2)

N = 1

Since n = 1 we will need one bit from the last octet in the subnet mask.

This results in 255.255.255.128 as the subnet mask

The block size will be 128

1st Subnet

Subnet mask = 255.255.255.128

Network ID = 192.168.40.0

Range of Valid Host = 192.168.40.1 - 192.168.40.126

Broadcast ID = 192.168.40.127

2nd Subnet

Subnet mask = 255.255.255.128

Network ID = 192.168.40.128

Range of Valid Host = 192.168.40.129 - 192.168.40.254

Broadcast ID = 192.168.40.255