

Hand in a stapled, printed copy with your answers.

Homework: /SI110/The Cyber Battlefield/Networks: Nuts & Bolts

1. On the left are listed three ways of identifying computers for network communication. Match them to a correct description from the right:

- ___ a. MAC address 1. Easily changed, used by the Internet Layer
- ___ b. IP address 2. Created to make it easy for people to remember hosts and servers
- ___ c. Domain Name 3. Not really changeable... used by the Link Layer

2. Consider the following two hosts:

Host A	Host B
IP address: 120.65.7.11	IP address: 120.65.5.5
Subnet mask: 255.255.240.0	Subnet mask: 255.255.240.0

Use the Network Address Calculator found on the course Resources page to answer the following: Are A and B on the same network? Explain how you arrived at your answer!

3. Consider the following three hosts.

	Host X	Host Y	Host Z
IP address	245.88.200.11	245.38.200.75	87.210.100.17
Subnet mask	255.255.252.0	255.255.252.0	255.255.255.0
Gateway Router	45.38.20.75	45.38.20.75	87.210.100.5
MAC address	88-82-A1-12-BB-3A	66-0B-6A-F7-39-DA	F3-46-20-72-39-B4

If host X wants to send the message "foobar" to host Z, which of the below describes what X sends to its switch? Explain your answer!

- a. send packet with IP 245.88.200.75:foobar to MAC address F3-46-20-72-39-B4
- b. send packet with IP 87.210.100.17:foobar to MAC address 66-0B-6A-F7-39-DA
- c. send packet with IP 87.210.100.17:foobar to MAC address F3-46-20-72-39-B4
- d. send packet with IP 245.38.200.75:foobar to MAC address 66-0B-6A-F7-39-DA