

In answering Parts 1 and 2 of this quiz, please show your calculations.

You are not required to adhere to any particular method; you might, for example, choose to convert from dotted decimal to binary. Where you are required to supply an IP address, please supply it in dotted decimal notation.

1) Given the host address 194.3.97.100/28, determine:

- a. The directed broadcast address;
- b. The number of subnets of the same size that are available within the classful address range;
- c. What /28 subnet is the above host on?

2) Given the supernet address 192.220.176.0/20, determine:

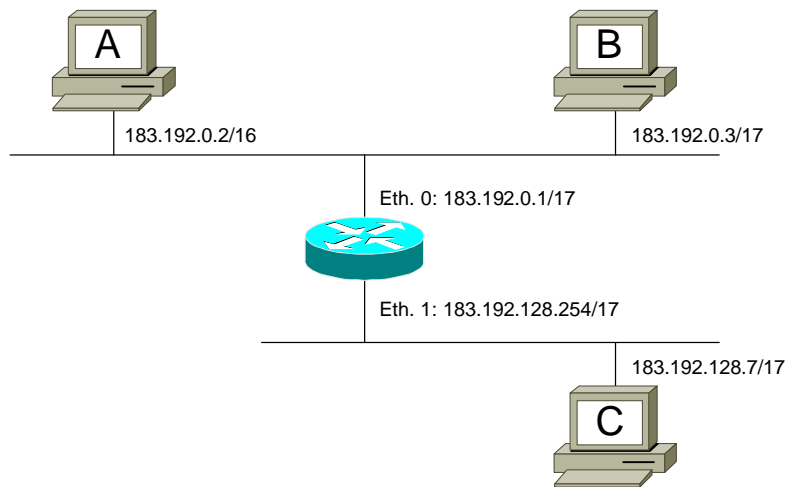
- a. The supernet's entire address range, from first host to last host.
- b. The number of class C networks available within that range.

3) A router has routes to the following subnets:

128.1.240.0/20 and 128.1.240.0/21

The router receives an IP packet destined for the host 128.1.240.253. Towards which subnet, 1 or 2, does the router forward the packet? Explain why.

The diagram below shows a router attached to two Ethernet local area networks.



The router is the default gateway for all three of the workstations, A, B and C, and proxy ARP is disabled on router's two Ethernet interfaces.

Two workstations cannot communicate. Which two are they? Explain why.