Lab 10.3.5b Subnetting a Class A Network

Objective

Analyze a Class A network address with the number of network bits specified in order to determine the following:

- Subnet mask

- Number of subnets

- Hosts per subnet

- Information about specific subnets

Background / Preparation

This is a written exercise and is to be performed without the aid of an electronic calculator.

Step 1 Given a Class A network address of 10.0.0.0 / 24 answer the following questions

How many bits were borrowed from the host portion of this address? _____

What is the subnet mask for this network?

1. Dotted decimal _____

2. Binary _____ _____ _____ _____

How many usable subnetworks are there? _____

How many usable hosts are there per subnet? _____

What is the host range for usable subnet sixteen? _____

What is the network address for usable subnet sixteen? _____

What is the broadcast address for usable subnet sixteen? _____

What is the broadcast address for the last usable subnet? _____

What is the broadcast address for the major network? _____