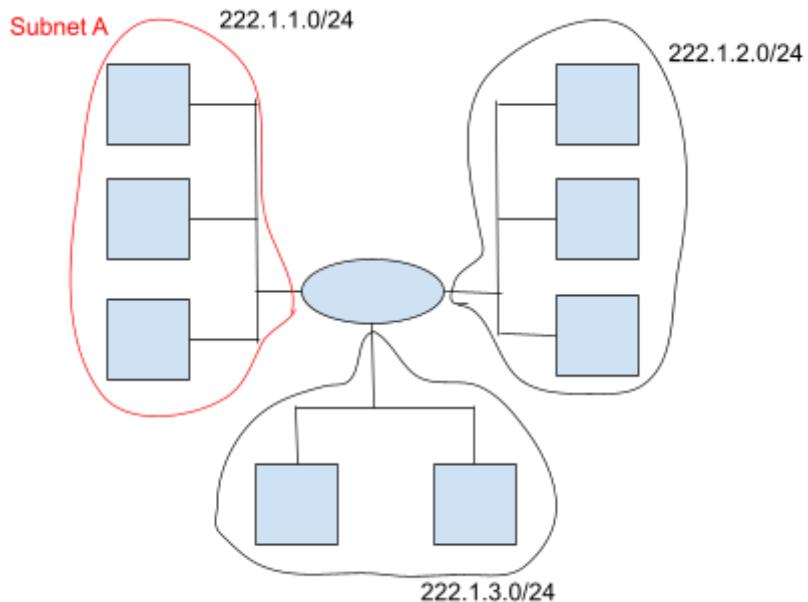


Week 35 Extension question - Subnetting a network



- What is the subnet mask for this network? Your answer should be in the form of an IP address.
- Label the IP address 222.1.1.14 to show the network identifier part and the host identifier part.
- Show how to use your answer to part a) to determine which subnet a device with IP address 222.1.1.14 belongs to and assign this IP to a device in this diagram.
- Label the other devices in the diagram with appropriate IP addresses.
- What is the maximum number of devices the network manager could add to subnet A?

Guidance for supervisors:

- 255.255.255.0
- Network identifier part = 255.255.255
Host identifier part = .0
- Convert subnet mask and IP address to binary. Do a bitwise AND. Answer is 222.1.1.0
-
- Devices on subnet A can be represented with IP addresses 222.1.1.0 - 222.1.1.255. So there can be a maximum of 256 devices on this sub network. Since there are already 3 devices in subnet A, the answer is 253.