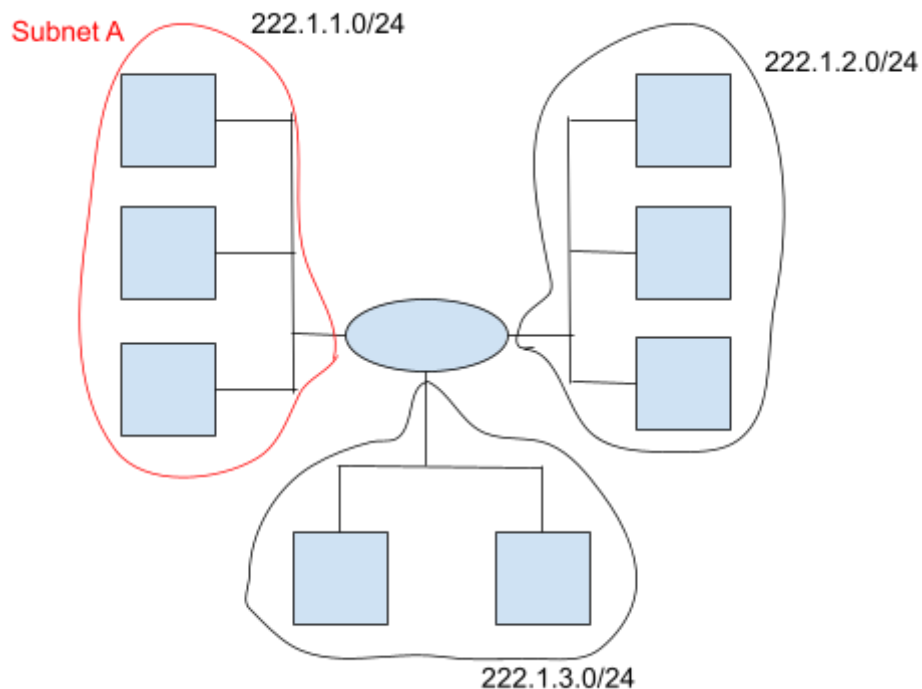# Network subnets

a) What is the subnet mask for this network? Your answer should be in the form of an IP address.

b) Label the IP address 222.1.1.14 to show the network identifier part and the host identifier part.

c) 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.

d) Label the other devices in the diagram with appropriate IP addresses.

e) What is the maximum number of devices the network manager could add to subnet A?

Guidance for supervisors:
a) 255.255.255.0
b) Network identifier part = 255.255.255
   Host identifier part = .0
c) Convert subnet mask and IP address to binary. Do a bitwise AND. Answer is 222.1.1.0
d) -

e) 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.