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This topic matters as it relates to what I am studying in this module which is network segmentation.

1. What is CIDR notation? a CIDR block?
   1. CIDR notation is a standard method for representing and specifying IP addresses and their associated network prefixes. It's used to express the range of IP addresses that belong to a specific network or subnet.
   2. A CIDR block represents a range of IP addresses defined by a CIDR notation. It defines a network or subnet along with the associated address range.
2. How many octets are found in an IPv4 address?
   1. There are four octets in an IPV4 address.
3. Setting binary aside and using the decimal system, what is the range of numbers found in an octet?
   1. The range of numbers found in an octet is 255.
4. What does the final digit after the “/” represent in an IPv4 address?
   1. Represents the subnet mask. This number indicates how many bits of the IPv4 address are reserved for the network identifier, leaving the remaining bits for host addresses within that network or subnet.
5. How many IP addresses are in the CIDR block 10.0.0.0/24?
   1. There are 254 IP addresses.
6. In your own words, describe network segmentation.
   1. Network segmentation is a network design that involves dividing a large network into smaller, isolated sections virtually. Each section is essentially its own smaller network with specific boundaries and access controls.
7. Network segmentation isn’t important as long as the network is using a well configured firewall. Do you agree? Why or why not?
   1. No, I don't agree, the more security there is the better ence the principle of defense in depth.The more layers of security the more security there is. For example If there is a network segmentation in a network, if one section is compromised the other ones are protected.
8. What is a screened subnet?
   1. A screened subnet is a network security design that incorporates an additional layer of security between an external network, such as the internet, and an internal network.
9. Cameras, ID card scanners, locked doors and biometrics are just a few examples of what type of security?
   1. They are a few examples of physical security.