

VPC Fundamentals (Assingment)

Assignment Solutions

1. How many subnet bits are required to support **5 subnets** using the CIDR block "**192.168.1.0/24**"? List all the subnets.

$$2^1 = 2$$

$$2^2 = 4$$

$$2^3 = 8$$

In order to support "5 subnets", we would need at least 3 bits for subnetting.

2. Determine the network and host bit in the network address "10.0.0.0/20"

Given Network Address: "10.0.0.0/20"

Network Bits:

/20 indicates that 20 bits are used for the network.

Network Bits = 20

Host Bits:

The remaining bits after the networks in 32-bits will be the host bits.

$$32 - 20 = 12$$

Host Bits = 12