VLSM Assignment 2

Question 3:

Lan Segment 1:

Number of hosts : 2 ^ m - 2 = 29

* N = 5

Subnet Mask

32 – 5 = 27

* Subnet mask plash for Lan segment is /27

Subnet address = 192.168.1.0/27 – 192.168.1.0/31

Lan Segment 2:

Number of hosts : 2 ^ m - 2 = 21

* N = 5

Subnet Mask

32 – 5 = 27

* Subnet mask plash for Lan segment is /27

Subnet Address: 2 ^ m = 32

* 192.168.1.32/27 – 192.168.1.63/27

Lan Segment 3:

Number of hosts : 2 ^ m - 2 = 12

* N = 4

Subnet Mask

32 – 4 = 28

* Subnet mask plash for Lan segment is /28
* Subnet address: 192.168.1.64/27 - 192.168.1.79/27

Lan Segment 4:

Number of hosts : 2 ^ m - 2 = 8

* N = 4

Subnet Mask

32 – 4 = 28

* Subnet mask plash for Lan segment is /28
* Subnet address: 192.168.1.80/27 - 192.168.1.79/27

Question 1:

LAN 1:

Number of hosts : 2 ^ m - 2 = 60

* N = 6

32 - 6 = 26

* /26

Subnet Address = 2 ^ m

* Log2(60) = 6
* 2 ^ 6 = 64
* 172.30.5.128/26 ( 64 addresses )

LAN 2:

Number of hosts : 2 ^ m - 2 = 10

* N = 4

32 - 4 = 28

* /28

Subnet Address = 2 ^ m

* Log2(10) = 4
* 2 ^ 4 = 16
* 172.30.5.192/28 ( 10 addresses )

LAN 3:

Number of hosts : 2 ^ m - 2 = 250

* N = 8

32 - 8 = 24

* /24

Subnet Address = 2 ^ m

* Log2(250) = 8
* 2 ^ 8 = 256
* 172.30.4.0/24 ( 256 addresses )

LAN 4:

Number of hosts : 2 ^ m - 2 = 100

* N = 7

32 - 7 = 25

* /25

Subnet Address = 2 ^ m

* Log2(250) = 8
* 2 ^ 8 = 256
* 172.30.5.0/24 ( 256 addresses )