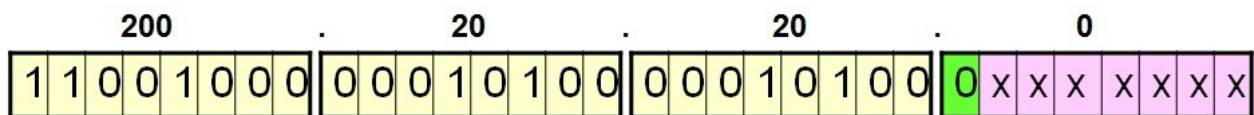# Experiment 10 : Familiarization with different Subnetting Techniques.
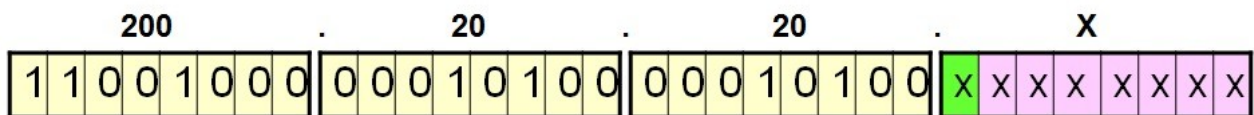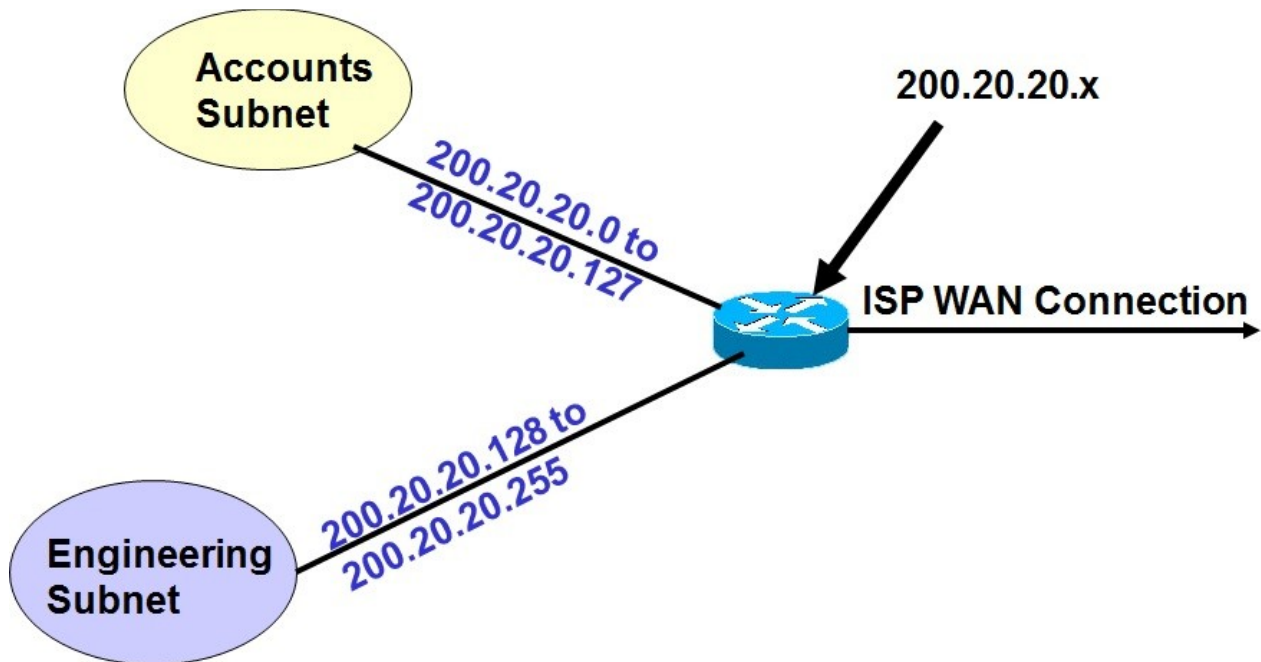

Accounts Subnet
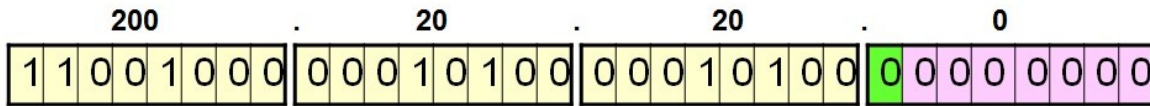200.20.20.0 to 200.20.20.127

200.20.20.x

ISP WAN Connection

Engineering Subnet
200.20.20.128 to 200.20.20.255

200	.	20	.	20	.	X
1 1 0 0 1 0 0 0		0 0 0 1 0 1 0 0		0 0 0 1 0 1 0 0		x x x x x x x x

200	.	20	.	20	.	0
1 1 0 0 1 0 0 0		0 0 0 1 0 1 0 0		0 0 0 1 0 1 0 0		0 x x x x x x x

Subnet 1 – 200.20.20.0 – 200.20.20.127

200	.	20	.	20	.	128
1 1 0 0 1 0 0 0		0 0 0 1 0 1 0 0		0 0 0 1 0 1 0 0		1 x x x x x x x
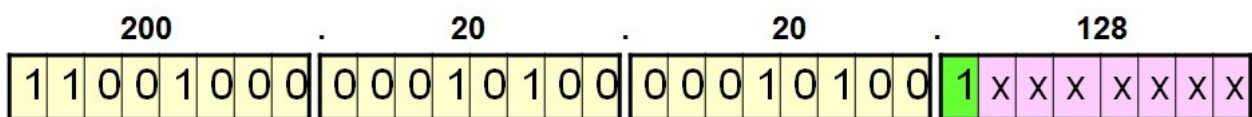
Subnet 2 – 200.20.20.128 – 200.20.20.255

Subnet1 Address Split
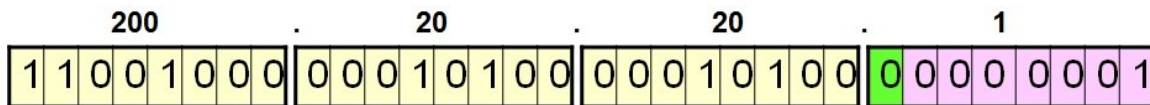
| 200 | . | 20 | . | 20 | . | 0 |

| 1 1 0 0 1 0 0 0 | 0 0 0 1 0 1 0 0 | 0 0 0 1 0 1 0 0 | 0 0 0 0 0 0 0 0 |

Subnetwork address – 200.20.20.0

| 200 | . | 20 | . | 20 | . | 1 |

| 1 1 0 0 1 0 0 0 | 0 0 0 1 0 1 0 0 | 0 0 0 1 0 1 0 0 | 0 0 0 0 0 0 0 1 |

1st Host address – 200.20.20.1

| 200 | . | 20 | . | 20 | . | 126 |

| 1 1 0 0 1 0 0 0 | 0 0 0 1 0 1 0 0 | 0 0 0 1 0 1 0 0 | 0 1 1 1 1 1 1 0 |

Last host address 200.20.20.126

| 200 | . | 20 | . | 20 | . | 127 |

| 1 1 0 0 1 0 0 0 | 0 0 0 1 0 1 0 0 | 0 0 0 1 0 1 0 0 | 0 1 1 1 1 1 1 1 |
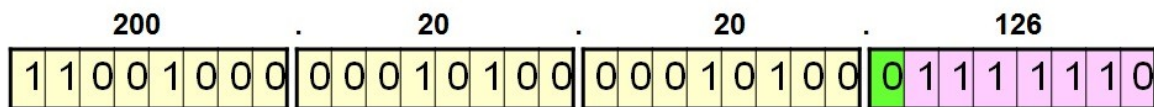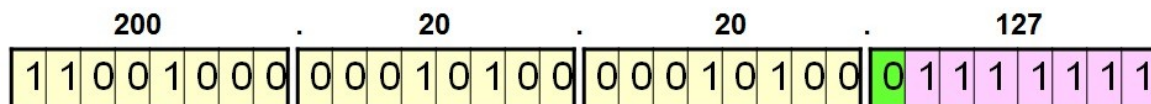
Subnet Broadcast address 200.20.20.127

Subnet2 Address Split
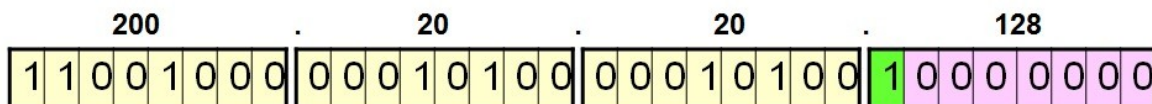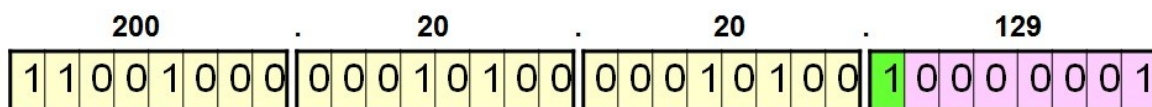
| 200 | . | 20 | . | 20 | . | 128 |

| 1 1 0 0 1 0 0 0 | 0 0 0 1 0 1 0 0 | 0 0 0 1 0 1 0 0 | 1 0 0 0 0 0 0 0 |

Subnetwork address – 200.20.20.128

| 200 | . | 20 | . | 20 | . | 129 |

| 1 1 0 0 1 0 0 0 | 0 0 0 1 0 1 0 0 | 0 0 0 1 0 1 0 0 | 1 0 0 0 0 0 0 1 |

1st Host address – 200.20.20.129

| 200 | . | 20 | . | 20 | . | 254 |

| 1 1 0 0 1 0 0 0 | 0 0 0 1 0 1 0 0 | 0 0 0 1 0 1 0 0 | 1 1 1 1 1 1 1 0 |

Last host address 200.20.20.254

| 200 | . | 20 | . | 20 | . | 255 |

| 1 1 0 0 1 0 0 0 | 0 0 0 1 0 1 0 0 | 0 0 0 1 0 1 0 0 | 1 1 1 1 1 1 1 1 |

Subnet Broadcast address 200.20.20.255

Accounts Subnet
200.20.20.0 to 200.20.20.63

HR Subnet
200.20.20.64 to 200.20.20.127

Engineering Subnet
200.20.20.128 to 200.20.20.191

Marketing Subnet
200.20.20.192 to 200.20.20.255

200.20.20.x

ISP WAN Connection
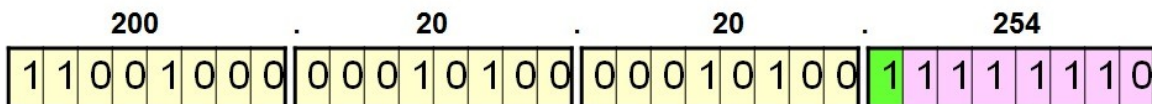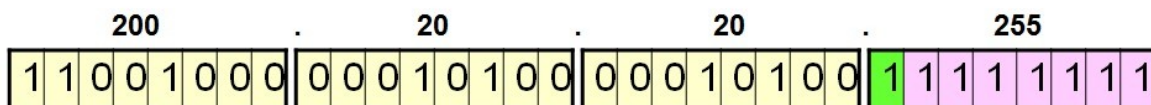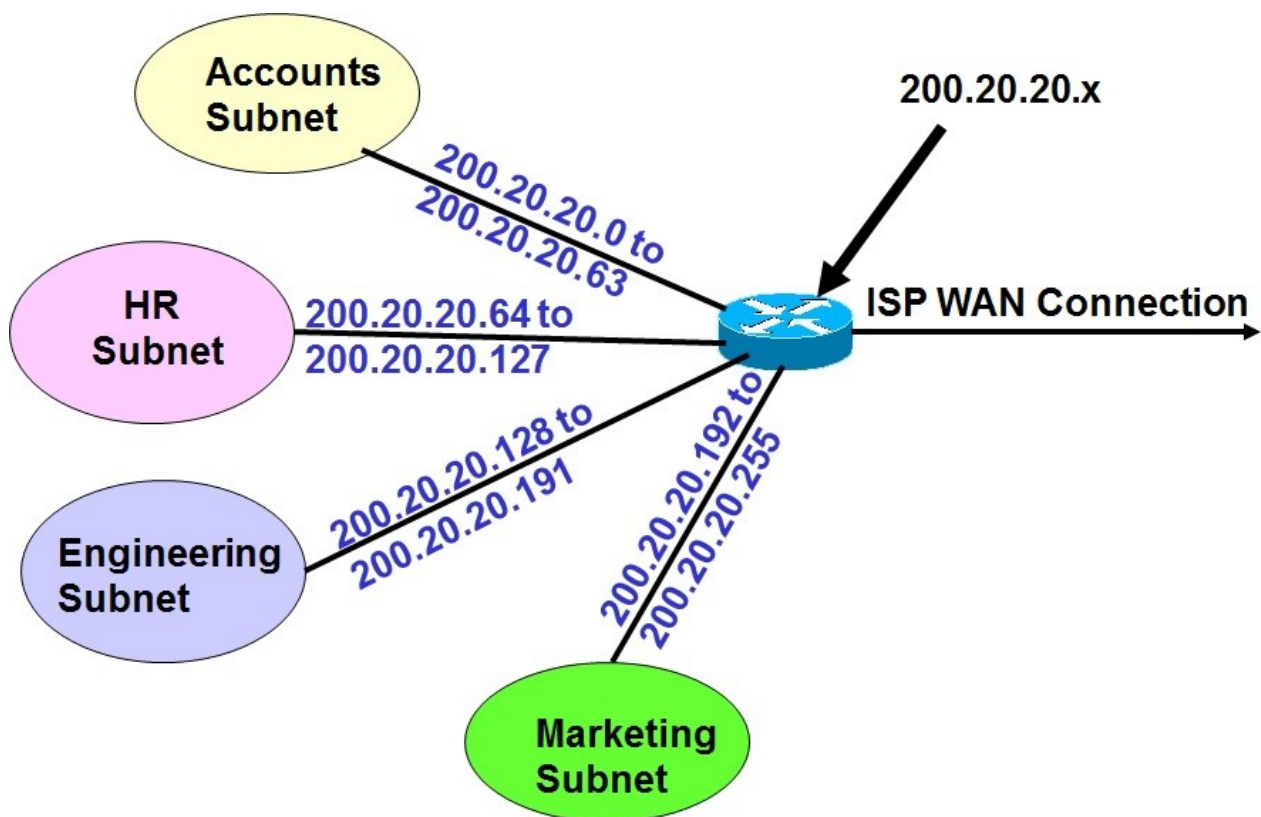
Network 200.20.20.X

Network Bits – 24, Host Bits - 8

Available address range – 200.20.20.0 – 200.20.20.255

Borrowing 2 bits from hosts creates 4 subnets

- Subnet 1 – 200.20.20.0 to 200.20.20.63
- Subnet 2 – 200.20.20.64 to 200.20.20.127
- Subnet 3 – 200.20.20.128 to 200.20.20.191
- Subnet 4 – 200.20.20.192 to 200.20.20.255

Subnet mask for Network is /26 or 255.255.255.192