IP Subnetting Task:

Allocated Network: 192.168.1.0 /24
Divide the given /24 network into **4 subnets**, and assign as follows:

- Subnet 1: Site A
- Subnet 2: Link between R1 and the Internet Router
- Subnet 3: Site B
- Subnet 4: Link between R2 and the Internet Router

My Subnetting Approach:

Step 1: Determine how many subnets we need

We need **4** subnets.

Using the formula:
2^n = number of subnets

2^2 = 4

So, we need **2 more bits** for the network portion.

Step 2: Visualizing Bit Allocation

Original /24:

11111111.11111111.11111111.00000000

Add 2 bits → Now /26:
11111111.11111111.11111111.11 000000

So, we've taken **2 bits** from the host portion to create **4 subnets**.

Step 3: Calculate the Subnet Mask and Increment

New subnet mask = /26
In decimal: 255.255.255.192
Increment: 256 - 192 = 64

We will use 64 as the block size to calculate the subnet ranges.

Subnets Table:

Subnet	Network Address	First Host	Last Host	Broadcast Address
Subnet 1	192.168.1.0/26	192.168.1.1	192.168.1.62	192.168.1.63
Subnet 2	192.168.1.64/26	192.168.1.65	192.168.1.126	192.168.1.127
Subnet 3	192.168.1.128/26	192.168.1.129	192.168.1.190	192.168.1.191
Subnet 4	192.168.1.192/26	192.168.1.193	192.168.1.254	192.168.1.255

Remember:

- First Host IP = Network Address + 1
- Broadcast Address = Next Network - 1
- Last Host = Broadcast Address - 1