Example of supernetting and subnetting

A subnet mask is used to identify which parts of the ip address are the network parts and which parts are the host parts.

e.g
IP 192.168.1.10
Subnet mask : 255.255.255.0

This indicates that the first 3 parts of the IP address are used to identify the Network.

Let's take a class C mask of 255.255.255.0

- If we **borrow 2 network bits**, the mask changes to 255.255.252.0, this is called **Supernetting**.

1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0
	Changed mask	1 1 1 1 1 1 0 0	
		252	

If on the other hand we borrow two host bits, the mask changes to 255.255.255.192, this is called subnetting.

1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0
	Changed mask		1 1 0 0 0 0 0 0
			192

Supernetting therefore allows you to have more hosts on one network, whilst subnetting allows you to have more inter networks but with less hosts.