

Let's use 195.70.16.159/30 as an example.

As it is a /30, we know the host portion is going to be in the fourth octet. Let's convert that to binary:

128	64	32	16	8	4	2	1
SN	SN	SN	SN	SN	SN	H	H
1	0	0	1	1	1	1	1

Now to find out the network address all we do is add the SN bits that have a 1 underneath them, together. ($128 + 16 + 8 + 4 = 156$).

When you add this 156 to the first three octets of the address, we're left with the **Network Address** 195.70.16.156.

Now, as we know that the **first usable address is always the Network Address plus one**, all we need to do is perform the following calculation: ($156 + 1 = 157$).

This gives us a **First Usable Address** of 195.70.16.157.

Now let's skip the Last Usable Address for a moment and find the Broadcast Address. To find out what it is, all we need to do is add all of the H bits together (regardless of whether they are a 1 or a 0) and then add this number to the Network Address. ($2 + 1 + 156 = 159$).

This gives us a **Broadcast Address** of 195.70.16.159.

And finally, let's work out the last usable address. This process is similar to finding the First Usable Address, however, instead of adding one to the network address, we actually subtract one from the Broadcast Address. ($159 - 1 = 158$).

This gives us a **Last Usable Address** of 195.70.16.158.

And there we have it! Our template is complete. For easy reference, here it is again:

- **Network Address:** 195.70.16.156
- **First Usable Address:** 195.70.16.157
- **Last Usable Address:** 195.70.16.158
- **Broadcast Address:** 195.70.16.159

As a shortcut, you can also use this formula. It works on subnets of any size:

- **First Usable Address** = Network Address + 1
- **Broadcast Address** = Next Network Address - 1
- **Last Usable Address** = Broadcast Address - 1