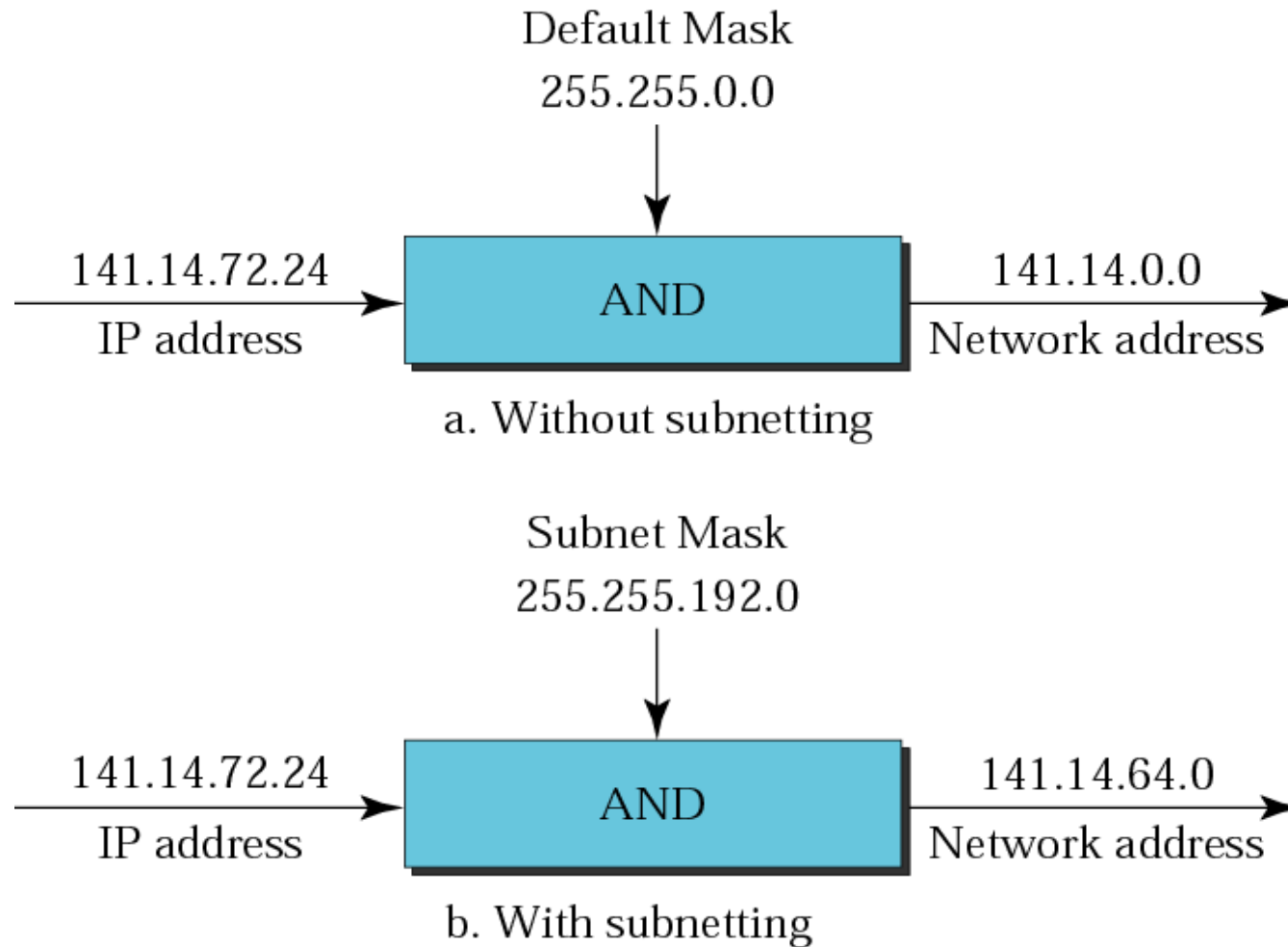


Figure 4.24 *Default mask and subnet mask*





Example 15

What is the subnetwork address if the destination address is 200.45.34.56 and the subnet mask is 255.255.240.0?

Solution

We apply the AND operation on the address and the subnet mask.

Address ☐ *11001000 00101101 00100010 00111000*

Subnet Mask ☐ *11111111 11111111 11110000 00000000*

Subnetwork Address ☐ *11001000 00101101 00100000 00000000.*

Figure 4.25 *Comparison of a default mask and a subnet mask*

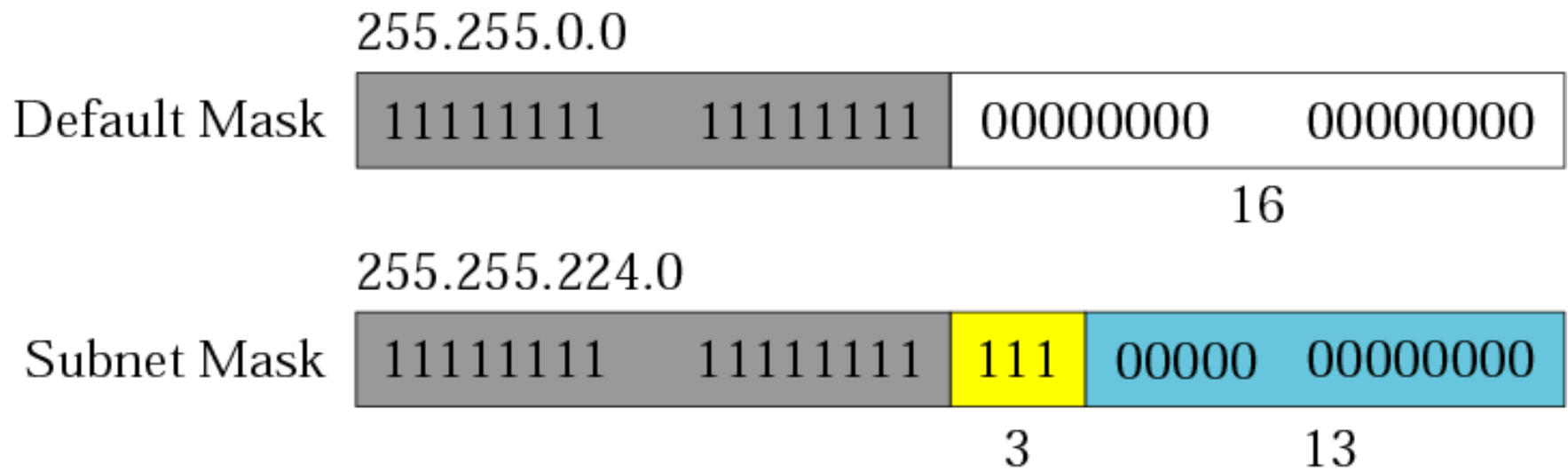
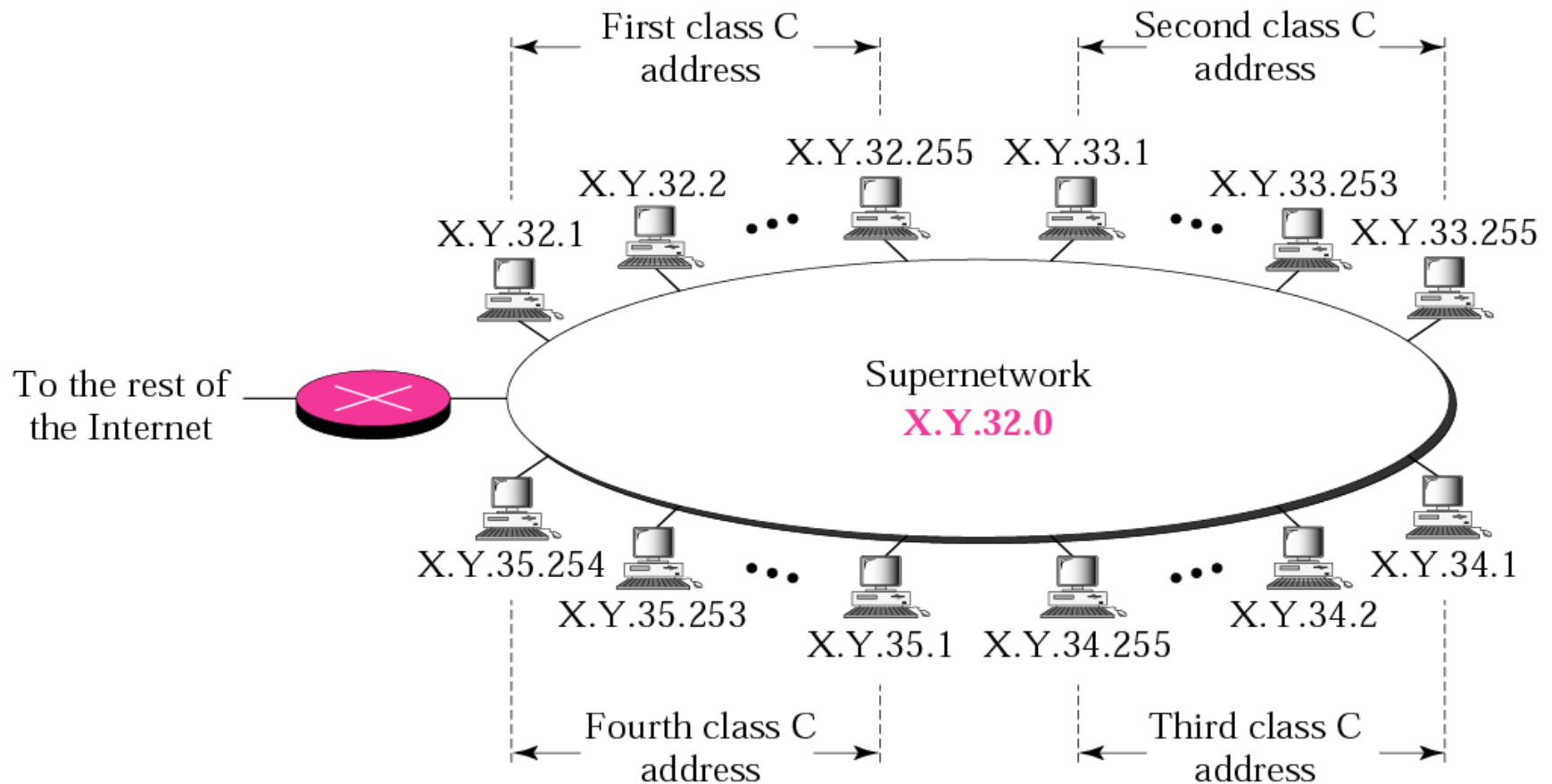


Figure 4.26 *A supernetwork*



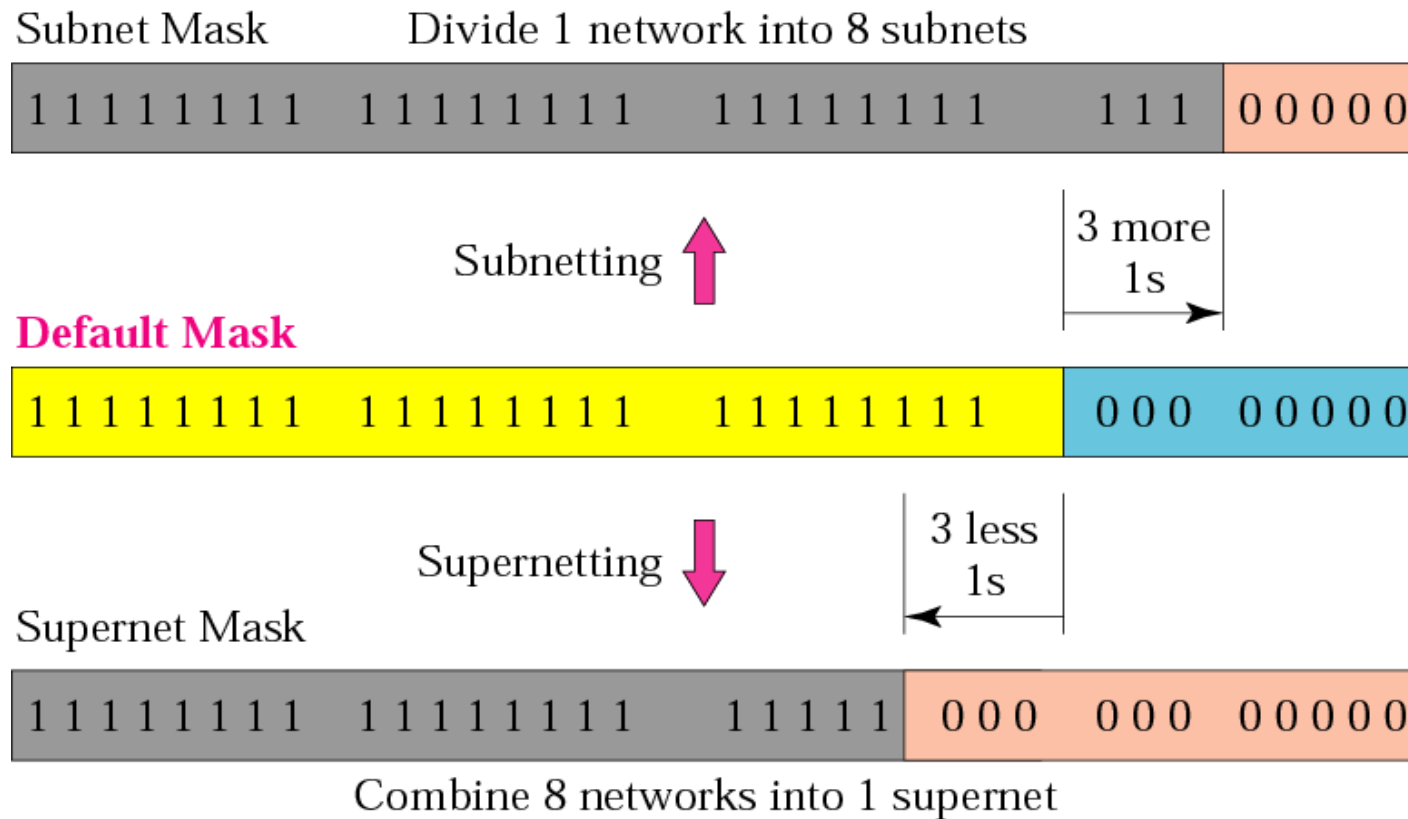


Note:

In subnetting, we need the first address of the subnet and the subnet mask to define the range of addresses.

In supernetting, we need the first address of the supernet and the supernet mask to define the range of addresses.

Figure 4.27 *Comparison of subnet, default, and supernet masks*





Note:

The idea of subnetting and supernetting of classful addresses is almost obsolete.