What does 192 mean in an IP address?

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When IP (Internet Protocol) was designed, it was thought useful to organize IP addresses into five classes, largely dependent on how many computers there were in the network. It was also expected that all the computers on a network would be publicly accessible from anywhere on the Internet. When you wanted a new network, you registered its address. Nobody else could use those addresses but everyone could talk to any of your computers.

1. Class A network can have 16,777,214 computers on it. It has an IP address that starts with a number from 0 to 127 although, in a colossal waste of space, 127 is reserved for the local loopback. (Only 127.0.0.1 is ever used.)
2. Class B network can have 65,534 computers on it. It has an IP address that starts with a number from 128 to 191.
3. Class C network can have 254 computers on it. That is plenty for any home network and most company networks. It has an IP address that starts with a number from 192 to 223.
4. Class D (224–239) is used for multicast.
5. Class E (240–254) is reserved for “experimental use”. It hasn’t been used for anything yet. There have been talks about opening it for use as public or private addresses but that would cause problems with existing routers that assume it is invalid. Bringing it into use would require massive changes all over the Internet

When the Internet got huge, those classes caused issues. There are far fewer computers that are accessible over the Internet than exist in private networks. We ran out of addresses, even if we redefine the classes.

So a set of private network addresses were defined:

Class A: Any address that starts with 10

One in the middle: Any address that starts 172 and the second number is 16–31.

Class C: Any address that starts with **192**.168

All routers will discard any traffic to a private network address. That means that it is entirely private. Anything you send on your own network will never get out to the Internet. Anything that comes in from the Internet will not be sent onto your local network. But of course, you do want to talk to the Internet. So your router does something called Network Address Translation. Your router has one single address on the Internet. When you make a connection to some server out in the world, your router sets up the connection using that single IP address and when the reply comes back it re-writes the address to the local network address of the computer that made the connection.

When a message comes from the Internet the router will throw it away unless it is something you have told it to expect. You will also have told it which computer on your network will deal with it.

Even now we all have phones, tablets, ebook readers, etc, 254 is still plenty of addresses to have available on our local network. That is why most of our computers have IP addresses that start 192.168 However you will sometimes come across the other private network addresses; they are not uncommon, even on a small home network. It depends on how your ISP set up your router.