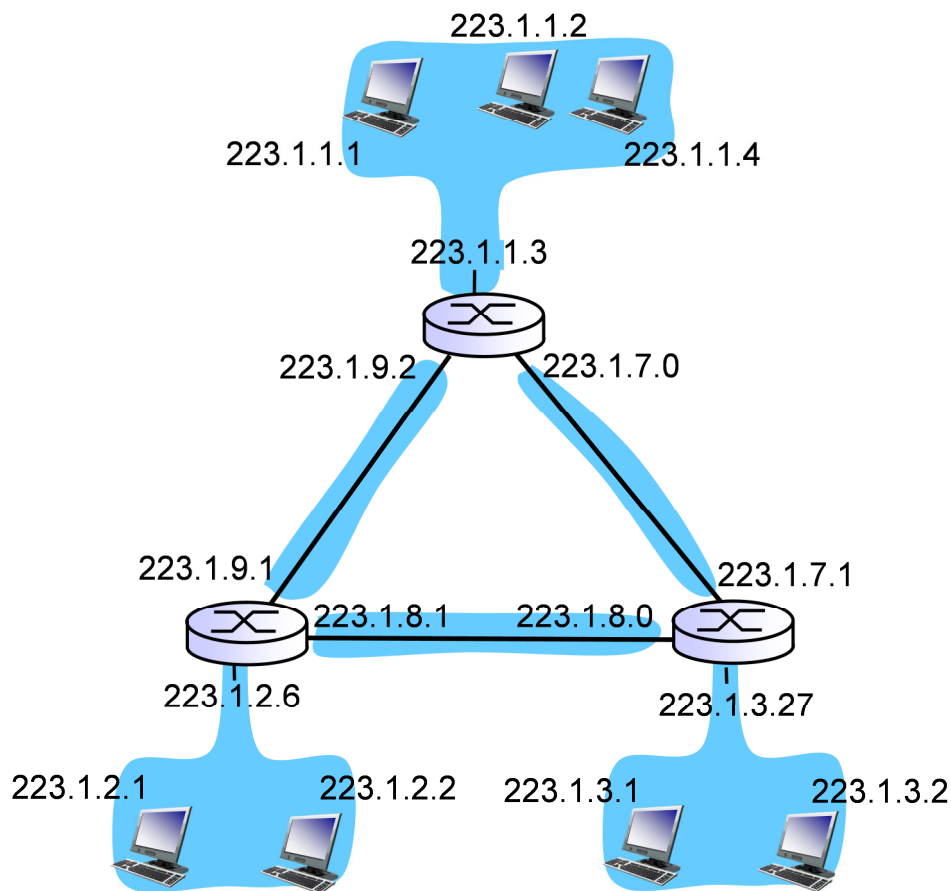


How many subnets are there?

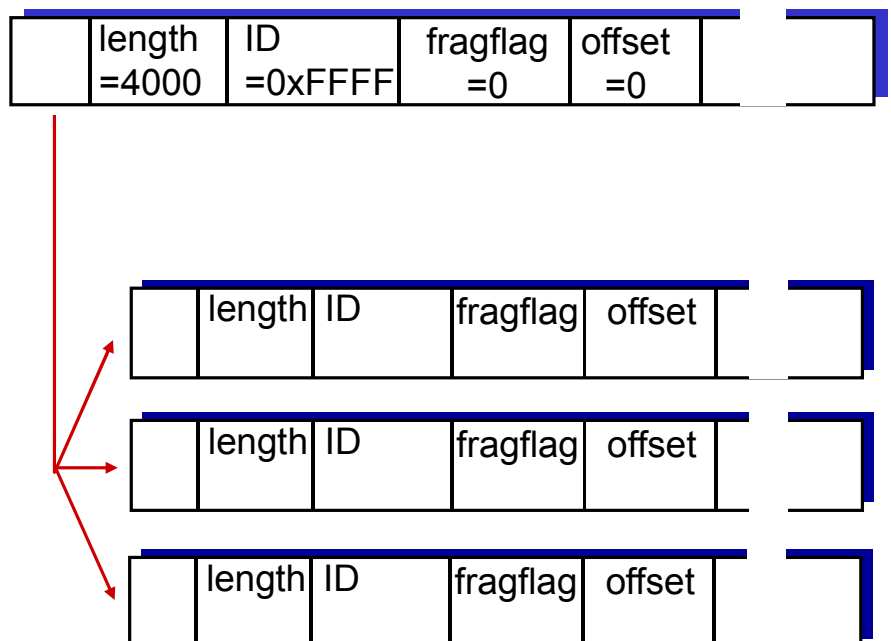
Can you identify the subnet mask for each subset?



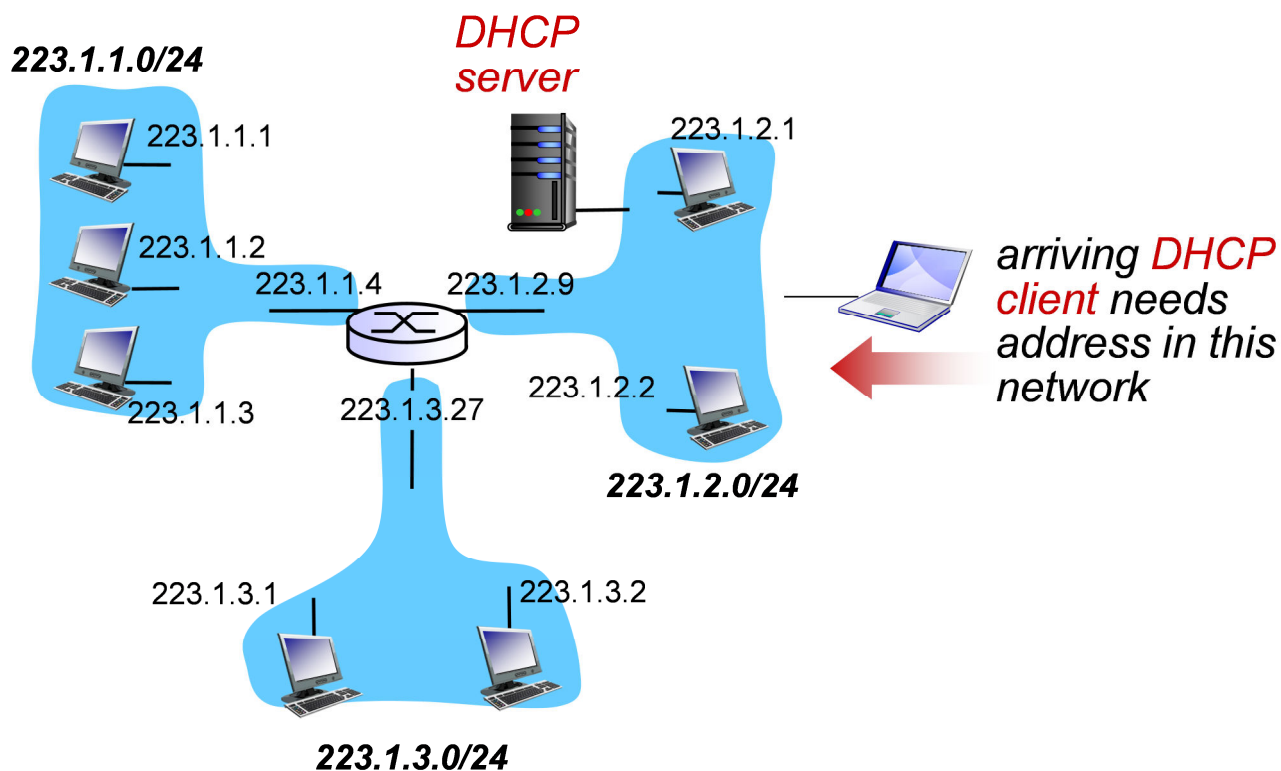
## Fragmentation example

*example:*

- ❖ 4000 byte datagram
- ❖ MTU = 1500 bytes



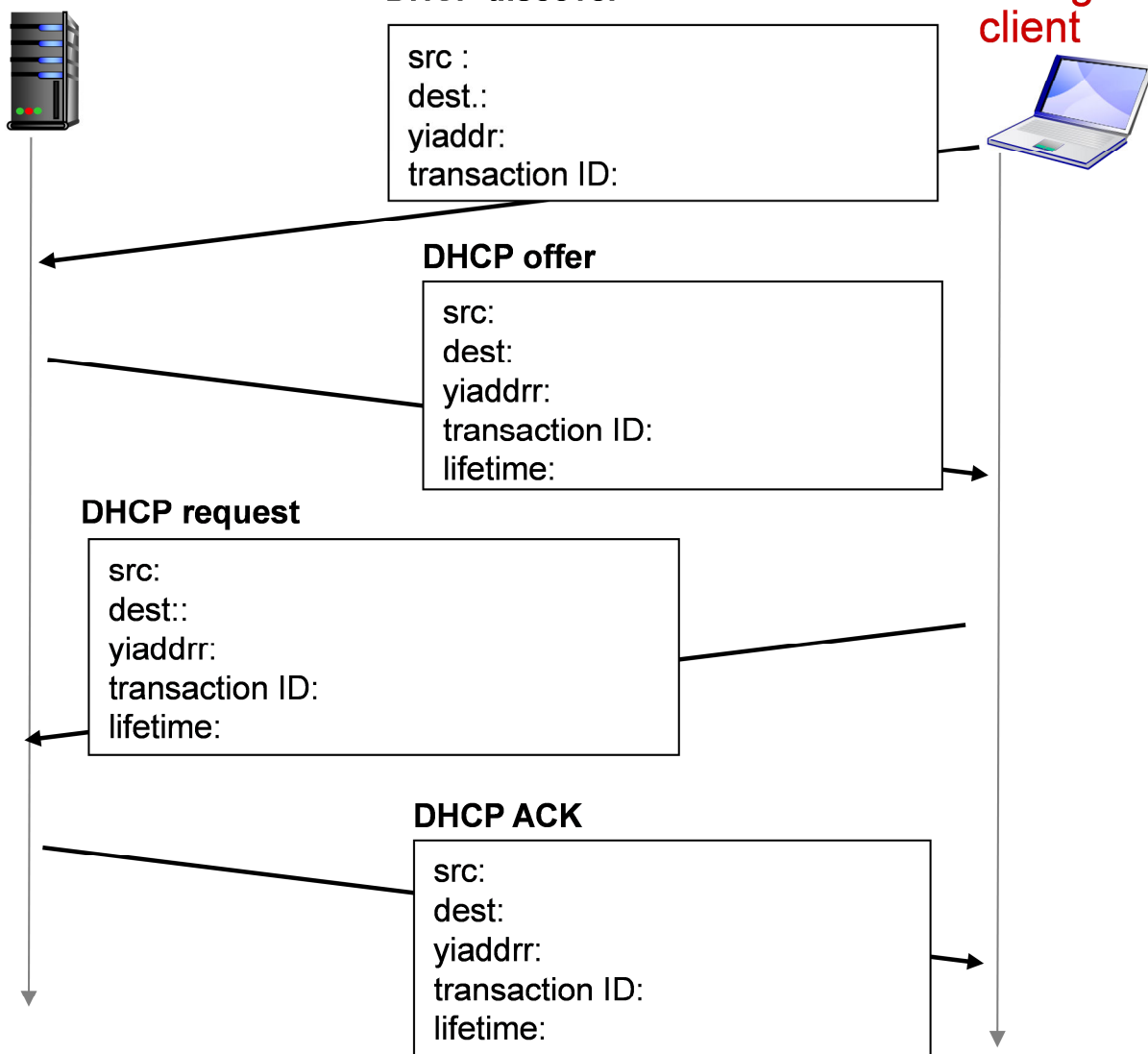
# DHCP



**DHCP server: 223.1.2.5**

**DHCP discover**

**arriving client**



**Q:** how does *network* get subnet part of IP addr?

**A:** gets allocated portion of its provider ISP's address space

ISP's block      11001000 00010111 00010000 00000000      200.23.16.0/20

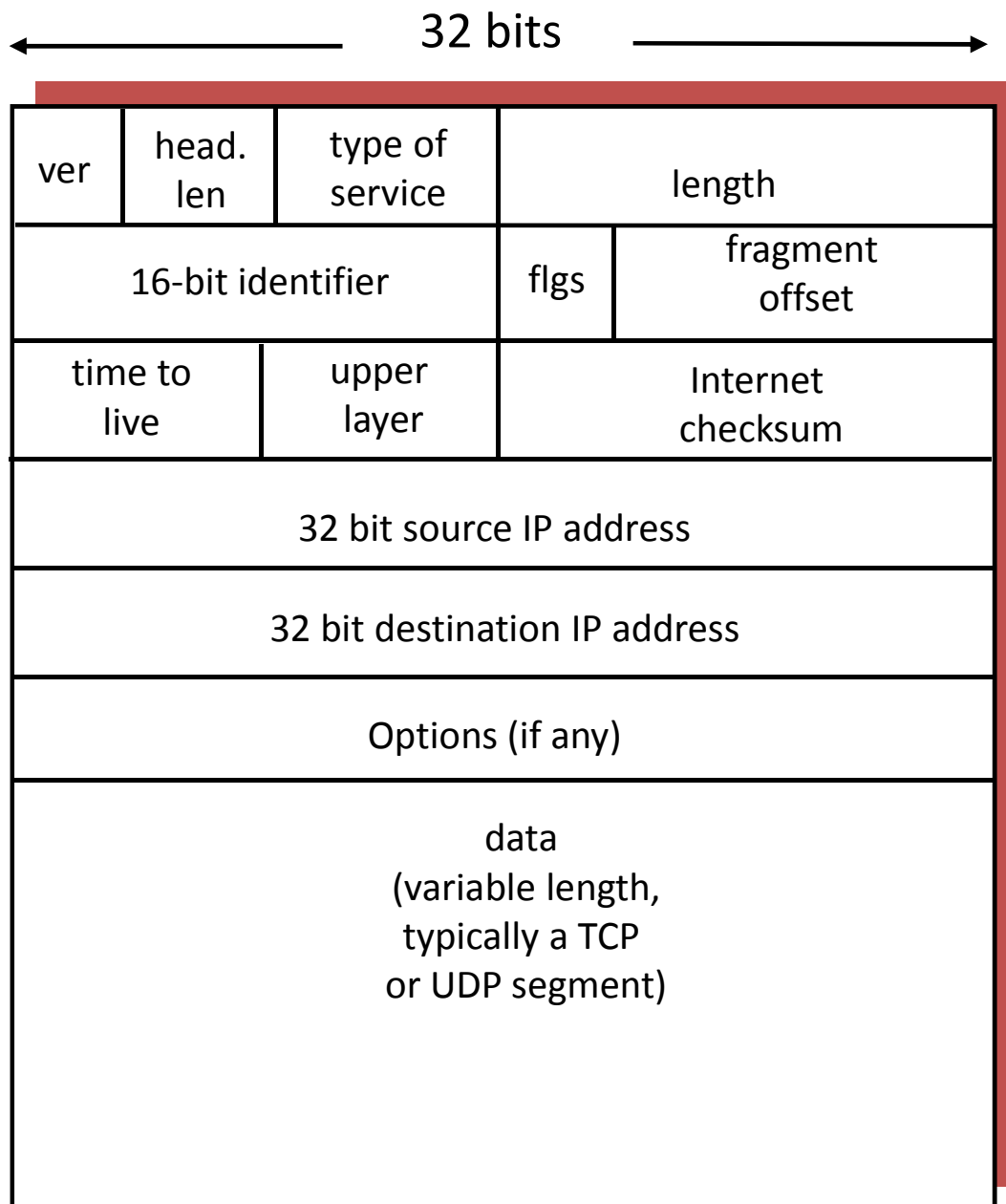
Organization 0    11001000 00010111 00010000 00000000

Organization 1    11001000 00010111 00010010 00000000

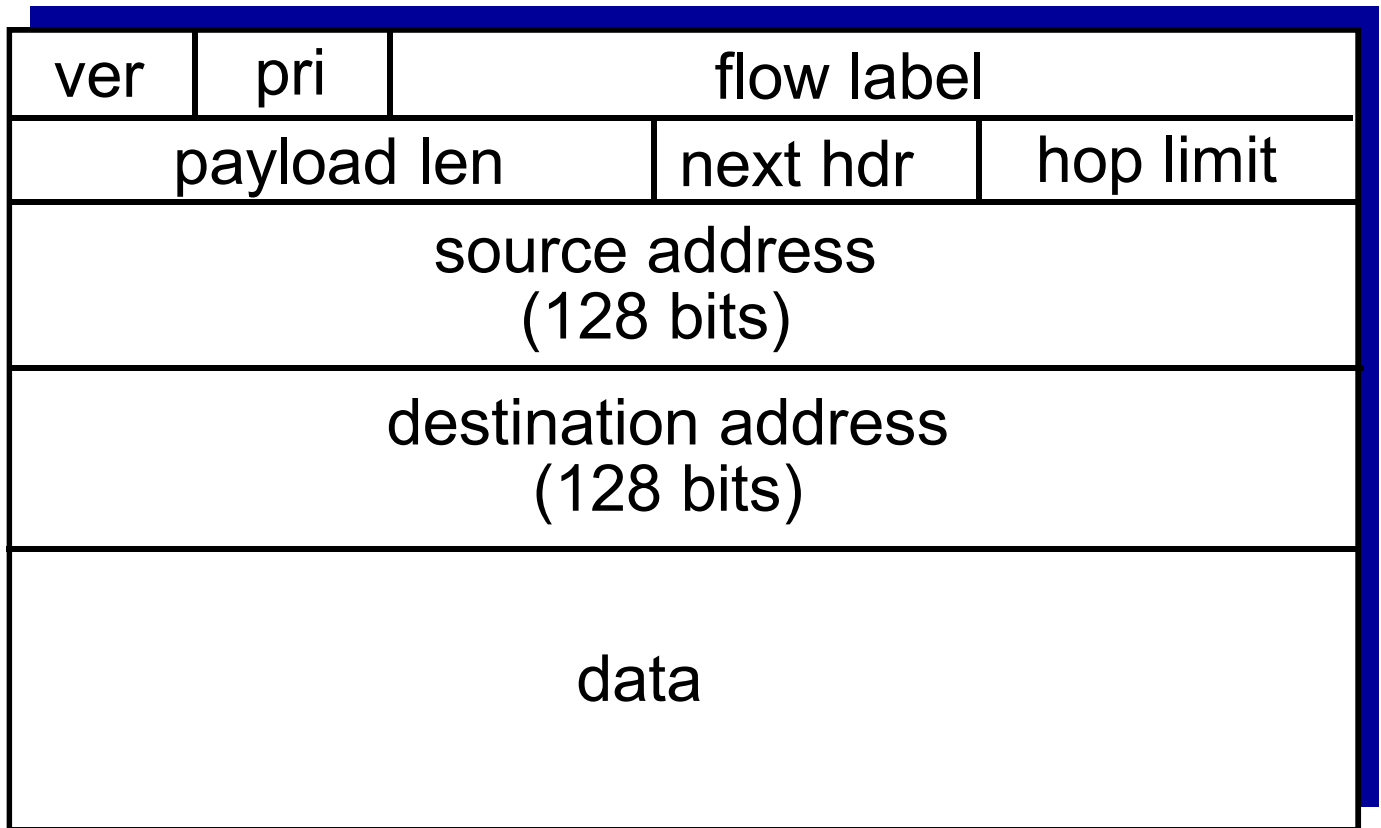
Organization 2    11001000 00010111 00010100 00000000

Organization 3    11001000 00010111 00011110 00000000

# IPv4 datagram format



# IPv6 datagram format



← 32 bits →