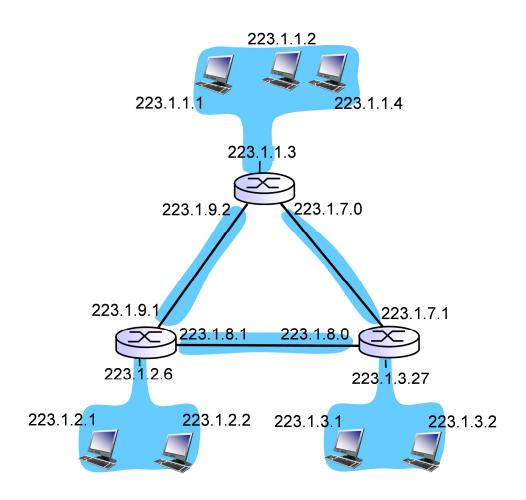
How many subnets are there?

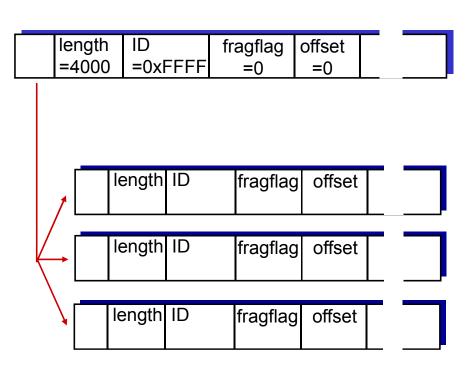
Can you identify the subnet mask for each subset?



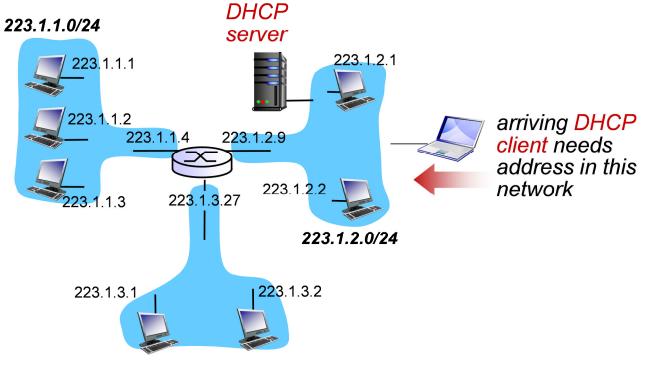
Fragmentation example

example:

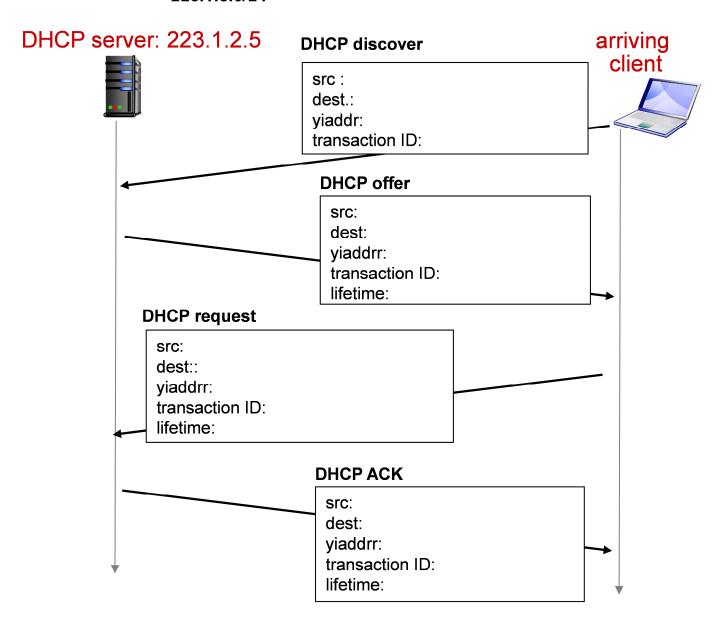
- 4000 byte datagram
- ♦ MTU = I500 bytes



DHCP



223.1.3.0/24



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

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

ISP's block	<u>11001000</u>	00010111	<u>0001</u> 0000	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

______ 32 bits _____

ver	head. Ien	type of service	length				
16-bit identifier			flgs fragment offset				
	ie to ve	upper layer	Internet checksum				
32 bit source IP address							
32 bit destination IP address							
Options (if any)							
data (variable length, typically a TCP or UDP segment)							

IPv6 datagram format

ver	pri	flow label				
payload len			next hdr	hop limit		
source address (128 bits)						
destination address (128 bits)						
data						

32 bits -