

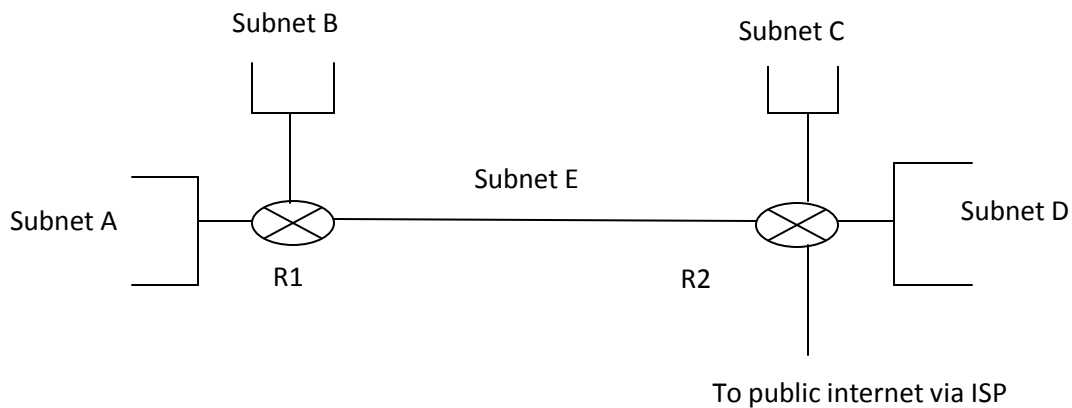
## In-class Exercises #1

### 1. IP Addressing

Suppose an organization owns the block of addresses of the form 129.17.129.97/27. Suppose it wants to create four IP subnets from this block, with each block having the same number of IP addresses. What are the prefixes for the 4 IP subnets?

2. Suppose a host has a file consists of 2 millions of bytes. The host is going to send this file over a link with MTU of 1500 bytes. How many datagrams are required to send this file?

### 3. IP addressing



Consider the network shown above. Each of the subnets A-D containing at most 30 hosts; subnet E connects routers R1 and R2

- Assign network addresses to the five subnets shown above
- Suppose that there are 17 hosts in A-D. Does your answers to a) changes? Why or Why not?
- What is the network prefix advertised by R1 to the public Internet?