Tutorial 1

Question 1

List several types of end system.

PC

Question 2

Name one home access technology, one enterprise access technology, and one wireless access technology.

wifi

Question 3

Suppose there is exactly one packet switch between a sending host and a receiving host. The transmission rates between the sending host and the switch, and between the switch and the receiving host, are R_1 and R_2, respectively. Assuming that the switch uses store-and-forward packet switching, what is the total end-to-end delay to send a packet of length L?

L/R1+L/R2

Question 4

There are 4 routers between the sending host and the receiving host. Each link has the transmission rate of 1.5 Mbps. Suppose that all routers use store-and-forward packet switching. The packet size is 8 Mbits. Assuming zero propagation delay, determine the total end-to-end delay to send the packet.

Dtrans=8/1.5
Dtotal=Dtrans*5

Question 5

Derive the formula for the end-to-end delay of sending P packets of length L over N links of transmission rate R.

Assuming only transmission delay
Delay for 1st packet = NL/R
delay of two packet = (N+1)(L/R)
Delay of P packets: (L/R)(N+P-1)