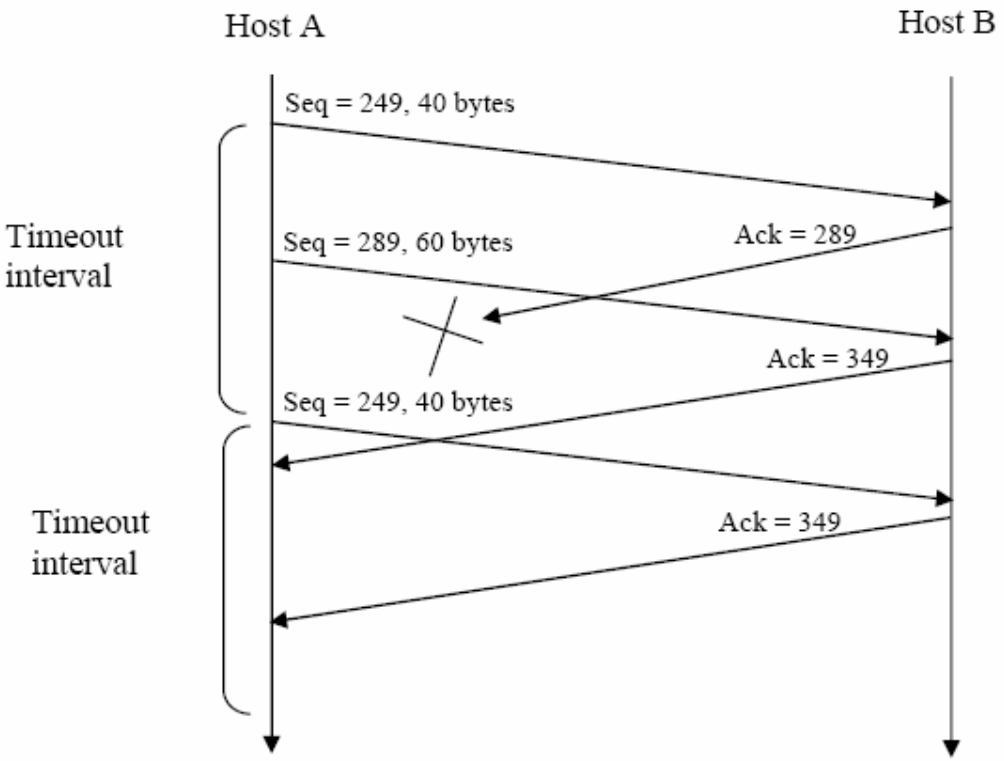
Chapter 3 Problems

Problem 24

a. In the second segment from Host A to B, the sequence number is 289, source port number is 503 and destination port number is 80.
b. If the first segment arrives before the second, in the acknowledgement of the first arriving segment, the acknowledgement number is 289, the source port number is 80 and the destination port number is 503.
c. If the second segment arrives before the first segment, in the acknowledgement of the first arriving segment, the acknowledgement number is 249, indicating that it is still waiting for bytes 249 and onwards.
d.



Problem 25

Host A sends data into the receive buffer faster than Host B can remove data from the buffer. The receive buffer fills up at a rate of roughly 50Mbps. When the buffer is full, Host B signals to Host A to stop sending data by setting RcvWindow = 0. Host A then stops sending until it receives a TCP segment with RcvWindow > 0. Host A will thus repeatedly stop and start sending as a function of the RcvWindow values it receives from Host B. On average, the long-term rate at which Host A sends data to Host B as part of this connection is no more than 50Mbps.