CS164 HW3

1)

a) TCP Slow starts at intervals 1-6, we can see by the exponential growth of window size, starts again from 23-26
b) Congestion Avoidance is operating from intervals 5-16
c) It is detected by a triple duplicate ACK, if it was a timeout cwnd would be 1
d) A timeout, a triple duplicate ACK would half cwnd
e) The ssthresh is 32 initially
f) The ssthresh is still 32 after the first segment loss because it didn't have a timeout
g) The ssthresh is 13 after the second segment loss because it is due to timeout. The cwnd is 26 at this point, so the new ssthresh would be half of that
h) Because packet loss is detected of a triple duplicate, the ssthresh stays at 13.

2)

If everything works correctly and there are no packet losses you would want to make the window size cover the transmission rate. Because the transmission rate is 1gigabit/sec you would just divide by the packet size which is 1250 bytes

This would be 100,000 as the window size n but we have to visualize that the RTT is 25 miliseconds.to account for this we need to subtract by .975seconds *1gigabit/sec /12 so the window size would actually be **98!**