

## Lab 7

### Q1: True

Unless there is a lost packet the slow start will continue until it hits a SStreshold, then it will continue linearly

### Q2: False

The window size increase by 1 MSS for every RTT

### Q3: True

If it unnecessarily induces TCP timeout then it may cause a fallback to MSS of 1 and a slow start.

### Q4: False

In the case of Timeout, it returns the MSS to 1

### Q5: A Triple Duplicate Ack

It drops the CWND by half and continues linearly

### Q6: No

Could be another reason for the duplication

### Q7: D Time out

The MSS drops to 1, signifying a timeout and not a Triple Duplicate

### Q8: No

It can retransmit the packet

### Q9 B Less

It means some segments are able to get through so a timeout is less likely

### Q10

At point A it uses an exponential growth by doubling it's MSS every time, it does this to reach it's SStreshold as fast as it can but leaving it open to catch loss packets. If it was more linear in this section it would take longer for the connection to determine the Maximum acceptable throughput rate.

### Q11

There is no question for Q11, it's just information and assumptions for the following questions.

**Q12 C 400ms**

100ms = 1000 < 8000

200ms = 2000 < 8000

300ms = 4000 < 8000

400ms = 8000 = 8000

**Q13 C 1200ms**

400ms = 8000 - > 4000

500ms = 5000

600ms = 6000

700ms = 7000

800ms = 8000 - > 4000

4000 - > 16000 would take 1200ms

**Q14 B 600ms**

100ms = 1000 < 10000

200ms = 2000 < 10000

300ms = 4000 < 10000

400ms = 8000 < 10000      Reaches SSThreshold and becomes linear

500ms = 9000 < 10000

600ms = 10000 = 10000

**Q15**

Other client traffic might lower, allowing more room for this sender's packets to get through the router.