

Lab 7

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Question 1:

True

Question 2:

False

** it increases by one MSS for every RTT

Question 3:

True

Question 4:

False

** TCP resets its window size to one MSS

Question 5:

(a) Triple Duplicate Ack

** i know this because the window halved its size (which is what happens when loss detected via triple duplicate ACK)

Question 6:

(b) No

** its either due to reordering or quening or asymmetric paths.

Question 7:

(d) Timeout

** because window is reset to 1 (which is what happens on timeout)

Question 8:

(b) No

** Congestion in either direction could cause $RTT > RTO$

Question 9:

(b) LESS

Question 10:

The 'slow start' phase wants to quickly find out the max rate at which it can send packets without loss. If it was done with a linear slope, it might take far too long to discover the max rate.

Question 11:

??

Question 12:

(c) 400 ms

** because exponential (ie. 1 -> 2 -> 4 -> 8, 4 RTT's)

Question 13:

(c) 1200 ms

**because $C = 4K$ ($8K/2$), $D = 16K$, so $16 - 4 = 12$ RTT's (because linear growth)

Question 14:

(b) 600ms

** because $E \rightarrow 8k$ is 4 RTT's & $8K \rightarrow F(10K)$ is 2 RTT's. 6 RTT's in total

Question 15:

The other clients on the router where using less bandwidth at the time leading up to D compared to B.