Lab 4

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Q1)

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| --- | --- | --- | --- |
| Packet/Ack | Seq# | Ack# | Size (bytes) |
| Packet 1 | 100 | 200 | 25 |
| Packet 2 | 200 | 100 | 20 |
| Ack 1 | 200 | 125 | 0 |
| Packet 3 | 125 | 200 | 50 |
| Packet 4 | 175 | 220 | 10 |
| Ack 4 | 200 | 185 | 0 |

Q2)

1. The slow start is operating at transmission rounds 1-7 and 22.5-26
2. Congestion avoidance is operating at transmission rounds 16-17 and 22-23
3. Triple duplicate ACK
4. Timeout
5. 32
6. 22
7. 2
8. ~392
9. 4

Q3)

|  |  |  |  |
| --- | --- | --- | --- |
| Sample RTT | Estimated RTT | Dev RTT | Timeout Interval |
| 106 | 26.62 | 23.59 | 121.0 |
| 120 | 19.20 | 42.89 | 190.78 |
| 140 | 20.77 | 61.98 | 268.68 |
| 90 | 14.72 | 65.30 | 275.93 |
| 115 | 17.09 | 73.45 | 310.91 |

Q4)

Host A sends 5 data segments to Host B and the 2nd segment is lost. Eventually all 5 data segments have been correctly recovered by Host B

|  |  |  |  |
| --- | --- | --- | --- |
|  | Segments sent by host A | ACKs sent by host B | Sequence numbers |
| GBN | 6 | 7 | 0,1,2,3,4,5 |
| SR | 5 | 6 | 3,0,1,4 |
| TCP | 8 | 6 | 2,4,6,8 |