Q1) 232129012 is the sequence number. The flag section of the segment identifies the segment as a SYN segment as the Syn is set to 1 and not 0 indicating that the segment is an SYN segment.

Graphical user interface, text, application

Description automatically generated

Q2) 883061785 is the sequence number. 232129013 is the value of the acknowledgement field. The acknowledgement field is determined by the server adding 1 to the sequence number of the SYN segment from the client computer. The flag section of the segment identifies the segment as a SYNACK segment as the Syn and Acknowledgement flags are set to 1.

Graphical user interface, text, application, email

Description automatically generated

Q3) The sequence number is 232129013.

Graphical user interface, text, application

Description automatically generated

Q4) The first 6 client sent segments’ sequence numbers in order (segments 1-6) are 232129013, 232129578, 232131038, 232132498, 232133958, 232135418. The time of those 6 segments being sent in order is 0.026477, 0.041737, 0.054026, 0.054690, 0.077405, 0.078157. The time the ack of each segment of those 6 segments received in order is 0.053937, 0.077294, 0.124085, 0.169118, 0.217299, 0.267802. The RTT of the 6 segments is as follows in order is 0.02746, 0.035557, 0.070059, 0.11443, 0.13989, 0.18964. The estimated RTT of the 6 segments in order is: 0.02746, 0.0285, 0.0337, 0.0438, 0.0558, 0.0725.

Text

Description automatically generated with medium confidence

Q5) There are no retransmitted segments in the trace file. I checked the TCP stream graph the time sequence stevens graph in order to answer this question.Chart, waterfall chart

Description automatically generated

Q6) The reciever typically acknowledges 1460 bytes. One segemnt is skipped and this is observed with ACK 131188401 (packet 198) and ACK 232291321 (packet 200). It acked over one segment.

Graphical user interface, table

Description automatically generated

Q7) To find the total number of bytes It is the first SYN sequence number subtracted from the last SYN sequence number of the connection. The first SYN number was 232129012(from question 1) and the last SYN sequence number is 232293103 (232293103-232129012=164091). So, 164091 bytes is the total throughput of the TCP connection. The total time of the TCP connection was 5.651141 seconds. So the total bytes per a second is 29037 bytes per second.

Graphical user interface, text, application

Description automatically generated