Question 1.
What is the IP address and TCP port number used by the client computer (source) that is transferring the file to gaia.cs.umass.edu? To answer this question, it's probably easiest to select an HTTP message and explore the details of the TCP packet used to carry this HTTP message.

IP: 128.119.245.12
Port: 80

Question 2.
What is the IP address of gaia.cs.umass.edu? On what port number is it sending and receiving TCP segments for this connection?

IP: 128.119.245.12
Port: 51080

Question 3.
What is the sequence number of the TCP SYN segment that is used to initiate the TCP connection between the client computer and gaia.cs.umass.edu?

Sequence Number: 0 (relative sequence number)
Sequence Number (raw): 1567935428

Question 4.
What is the sequence number of the SYNACK segment sent by gaia.cs.umass.edu to the client computer in reply to the SYN?

Sequence Number: 0 (relative sequence number)
Sequence Number (raw): 1521771974

Question 5.
What is the value of the ACK field in the SYNACK segment?

Acknowledgment Number: 1 (relative ack number)
Acknowledgment number (raw): 3700301294

Question 6.
What is the sequence number of the TCP segment containing the HTTP POST command? Note: This is <u>not</u> the HTTP POST packet you find by typing "http" into the search filter. To find the packet in question, you'll need to dig into the packet content field at the bottom of the Wireshark window, looking for a segment with a "POST" within its DATA field.

Sequence Number: 1 (relative sequence number)
Sequence Number (raw): 3700301294

Question 7.

Consider the TCP segment from question 6 as the first segment in the TCP connection. The next packet sent from the client is then the second packet. Use the difference between when the packet was sent and the ACK recieved to determine the RTT for the second packet?

NB: Use "," and not "." your answer. Include 6 decimals.

1498818052.980741000-1498818052.981458000=

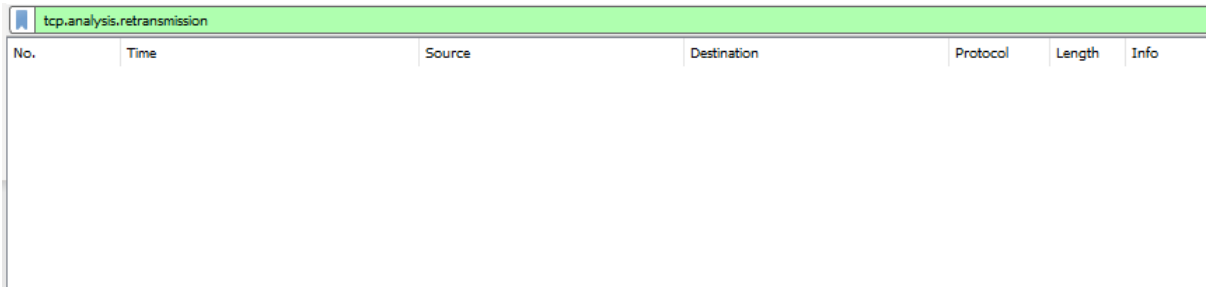
Epoch Time: 1498818052.980741000 seconds; The first packet
Epoch Time: 1498818052.981458000 seconds; The second packet
1498818052.981458000 - 1498818052.980741000 = 0.00071692466 ~= **0.000717seconds**

Question 8.

What is the length of the third packet? Use the length of the TCP segment.

TCP Option - Maximum segment size: 1460 bytes
Kind: Maximum Segment Size (2)
Length: 4
MSS Value: 1460

Question 9.

Are there any retransmitted segments in the trace file?

No there are none: