processing delay is the time it takes to examine the header and see where it's going and check for errors

Queueing delay is- waiting for the package to be sent, depends on how many other packets

transmission delay, router needs to wait until all packets have arrived before it can send them

pro pagation delay is the time it takes for package to be sent physically (formula page 65 Kr) from router A to router 8

Round trip time A3:

Nodal delays:

2+1+5+24 = 32 ms

Distance:

5+750+20 = 775 meter

775\*4/240000000 = 0,01291666 milliseconds

32\*4 = 128 milliseconds

So the overall the delay is 128.0129 milliseconds given an empty file to negate the effect of connection speeds. We need to make 4 trips, two for setting up the connection and one for requesting and one for receiving the file. Here the propagation delay is negligible due to the short distances. If it were several kilometers as would be more normal then the propagation delay would be more impactful.

Part 2:

For the first half, setting up the connection the connection, the data size does not really matter as we’re just sending the header. So we can just use our calculation from previously and half it, then we have the time it takes to establish the connection and here we will ignore the propagation delay, so the connection time will take 64 ms.

Next we need to calculate the amount of time it takes to send the data, for this since we are ignoring the propagation speed we will just take the slowest link in the chain. Again if this was a longer connection, say we needed data from California, then it would be prudent to calculate each section independently as the propagation speed would actually matter. The slowest section is then the 2Mb/s connection.

250/640 = 0.32 seconds or 390 milliseconds.

12500/640 = 156 milliseconds

1000000/640 = 15,6 milliseconds

54000/640 = 84 milliseconds

We can now add that to our already established RTT and therefore get 64 ms to establish the connection and 320+156+16+84 = = 576 ms to send the package, so 704 ms in total.

if you want to calculate the exact delay you would need to calculate the propagation speed for each link

HTTP page 130

method field is about what the request is about. Do you want to get Something, post, delete etc

Difference between post and get is that with get the entity body is empty, where with post it's used to fill out a form like a search engine

Cookies are used to identify the users, this database is kept both locally and on server for website. Set-cookie is for setting the cookie ID, then the cookie line is used to compare afterwards

cookies are basically tags. If it matches then the server can auto fill information tied to the user

DNS page 155

DNS is decentralised, which means that it is extremely robust. It is also able to scale up to meet demands in traffic, both in terms

 of volume and geographically, so developing countries are not at a disadvantage. And DNS is more efficient than remembering Ip addresses Same reason as we have phone books

CNAME give the full name of a host, which with mx allows DNS to provide a simpler name. DNS helps alleviate pressure by moving people to the relevant address instead of everyone starting at the Same point, then DNS guides people to the right place

 recursive queries are mainly used when something is not direct, i. e if a server needs to get something for you from another DNS server. Iterative request are more direct, say you request data directly from a server then it can just send it directly to you without a middleman