This question is related to the two cases of network architecture:

1. Client-Server
2. P2P

For the two different framework we need to analyse the efficiency of sharing data, so for Client-Server we have:

$$D_{cs} = \max \{NF/u_s, F/d_{min}\}$$

while for P2P we have:

$$D_{p2p} = \max \{F/u_s , F/d_{min} , NF/(us + \sum_{i=1}^{N} U_i)\}$$

For this two formula, you can find from the question description or Lecture-Notes: https://webcms3.cse.unsw.edu.au/static/uploads/course/COMP3331/20T1/d03458654a0f12ca6959ed8f879ed9245a19f3267d25967e13b47c65c7b9b54f/4.Application_Part2.pdf

Thus, according to this formula we can calculate the D(distribution time) for two different cases:

Client-Server:

server upload rate: us = 20 Mbps, peer download rate: di = 1 Mbps, peer upload rate: 200 Kbps and peer number is: N = 10

--> NF/us = 10 * 10 Gbits / 20 Mbps = 10 * 10 * 10^9 bits / (20 * 10^6) = 5000 sec

--> F/d = 10 Gbits / 1 Mbps = 10,000 sec

--> max {NF/us, F/d} = 10,000 (we get the answer, you can see the below **first** char the first column and first row)

For other columns and rows they sharing the same calculate method, just change N's value.

P2P:

server upload rate: us = 20 Mbps, peer download rate: di = 1 Mbps, peer upload rate: 200 Kbps and peer number is: N = 10

--> F/us = 10 Gbits / 20 Mbps = 10 * 10^9 bits / (20 * 10^6) = 500 sec

--> F/d = 10 Gbits / 1 Mbps = 10,000 sec

--> NF/(us + SUM) = 10 * 10 Gbits / (20 Mbps + 200 Kbps * 10) = 100/22 * 10^3

max = 10, 000 sec (we get the answer, you can see the below **second** char the first column and first row)

For other column and rows, they share the same methods.