Exercise 2

Name:_____ Student ID:_____

Question 1

Host A sends a packet of 1,234 bytes to host B via 2 routers. The distance between host A and the first router is 30 m. The distance between host B and the second router is 35 m. The distance between the two routers is 400 m. The propagation speed is 2×10^8 m/sec. The recommended transmission rates are: 3 Mbps between host A and the first router, 200 Gbps between the 2 routers, and 5 Mbps between the second router and host B. Each router spends 1 msec to perform error detection.

(a) **Show the calculation** at what time the last bit of the packet leaves host A?
(b) **Show the calculation** at what time the last bit of the packet reaches the second router?
(c) If there is no congestion in the network, **show the calculation** the total end-to-end transmission delay for host A to send the packet to host B.

[3 marks]