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Problem Set 21

Problem 1:

The output packet rate initially increases proportionally to the increase in the input packet rate because the router is forwarding the input packets.

Problem 2:

The output packet rate begins to fall as the input rate increases because so much time is spent processing device interrupts caused by the input that there is not enough time for higher-level processing of the received packets.

Problem 3:

The peak is the maximum rate of input packets the system can handle before it must drop packets. This is determined by the amount of processing time required per packet, and the total processing power available.

Problem 4:

The rate at which the output rate falls is determined by the amount of interrupt-level processing time required per packet, relative to the total amount of processor time available.