

MATH 371
Review problems

4. Customers arrives at a checkout counter according to a Poisson distribution with mean $\lambda_1 = 7$ during the 5 - 6 pm hour, and $\lambda_2 = 10$ during the 6 - 7 pm hour. Find the distribution of $U = Y_1 + Y_2$, the number of customers arriving in at the checkout counter in the 2 hour period, 5 - 7 pm. What is the probability 20 or more customers arrive during this time window?