MATH 203: PRINCIPLES OF STATISTICS 1
FALL 2024
PRACTICE CALCULATIONS USING DISCRETE DISTRIBUTIONS

The printed numerical values are the probabilities resulting from the ten calculations, but the answers have been permuted, so the printed probability may not correspond to the question that it is printed alongside.

1. If $Y \sim$ *Poisson(9.34)*, compute $P(y_1 < Y \leq y_2)$ for $y_1 = 6$ and $y_2 = 8$. 0.2342

2. If $Y \sim$ *Poisson(3.02)*, compute $P(Y > y)$ for $y = 3$. 0.8100

3. If $Y \sim$ *Geometric(0.82)*, compute $P(Y = y)$ for $y = 2$. 0.1434

4. If $Y \sim$ *Geometric(0.8)*, compute $P(Y > y)$ for $y = 1$. 0.1651

5. If $Y \sim$ *Poisson(6.29)*, compute $P(Y = y)$ for $y = 7$. 0.2000

6. If $Y \sim$ *Poisson(4.24)*, compute $P(Y > y)$ for $y = 3$. 0.6120

7. If $Y \sim$ *Geometric(0.83)*, compute $P(y_1 < Y \leq y_2)$ for $y_1 = 1$ and $y_2 = 3$. 0.1476

8. If $Y \sim$ *Binomial(7,0.83)*, compute $P(y_1 < Y \leq y_2)$ for $y_1 = 5$ and $y_2 = 7$. 0.3572

9. If $Y \sim$ *Geometric(0.81)*, compute $P(Y \leq y)$ for $y = 1$. 0.1056

10. If $Y \sim$ *Geometric(0.88)*, compute $P(y_1 < Y \leq y_2)$ for $y_1 = 1$ and $y_2 = 2$. 0.6604