Problem 6. Suppose $X \sim \text{Poisson}(\lambda = 1)$. Derive the probability mass functions of

(a) $Y = X + 1$.

(b) $Y = \max(X, 2)$.

For those who want to do more practice, you can solve the following problems (DO NOT turn them in): 6.8 (a, b), 6.9 (a, b), 6.10, 6.12 (a, b), 6.34, 6.37, 6.38, 6.41, 6.46, 6.52.