CS 333202: Probability and Statistics
HW12 Part II

1. $M_X(t) = \frac{1}{5}(e^t + e^{2t} + e^{3t} + e^{4t} + e^{5t})$.

2. (a) $M_X(t) = e^{\lambda(e^t - 1)}$

   (b) $E(X) = \lambda$ and $\mathrm{Var}(X) = \lambda$

   (c) $P(X = 0) = e^{-3}$.

3. $M_X(t) = \frac{2e^t}{3-e^t}$ and $E(X) = 3/2$.