

$$q(0) = P(Y = 0) = P(X = 3) = \frac{1}{6} = 0.1667$$

$$q(1) = P(Y = 1) = P(X \in \{2, 4\}) = \frac{2}{6} = 0.3333$$

$$q(2) = P(Y = 2) = P(X \in \{1, 5\}) = \frac{2}{6} = 0.3333$$

$$q(3) = P(Y = 3) = P(X = 6) = \frac{1}{6} = 0.1667$$