

$$P(X_1 = 0) = \frac{4}{8} = 0.5$$

$$P(X_1 + X_2 + X_3 = 0) = \frac{1}{8} = 0.125$$

$$P(X_1 + X_2 + X_3 = 1) = P(\{(0, 0, 1), (0, 1, 0), (1, 0, 0)\}) = \frac{3}{8} = 0.375$$