1. Suppose that we need to perform near-duplicate detection in a collection of three documents. Their sets of shingle fingerprints are as follows.
\[ D_1 : \{0, 1, 2\} \]
\[ D_2 : \{1, 3, 4\} \]
\[ D_3 : \{0, 2, 3\} \]
Please estimate their pairwise Jaccard coefficients using MinHash with the following two hash functions.
\[ h_1(x) = (2x + 1) \pmod{5} \]
\[ h_2(x) = (3x + 1) \pmod{5} \]