Question 1:

For the following vectors, x and y, calculate the indicated similarity or distance measures.

1. x=(1,-2,2,1), y = (2,2,2,2) Euclidean
2. x=(0,1,1,1), y = (1,0,-1,0) city block (manhattan) distance

Question 2:

For binary data, compute the simple matching (SMC) and Jaccard coefficients

x = 0101010111

y = 0100011000

Question 3:

Consider the training examples show in the below table for a binary classification problem

Compute the Gini index for the Customer ID attribute.

Table

Description automatically generated

Question 4: Using the below data, compute the silhouette coefficient for point P1

Table

Description automatically generated