**// part a**

public static int arraySum(int[] arr)

{

int sum = 0;

for(int i = 0; i < arr.length; i++)

{

sum += arr[i];

}

return sum;

}

**// part b**

public static int[] rowSums(int[][] arr2D)

{

int[] rows = new int[arr2D.length];

for(int r = 0; r < arr2D.length; r++)

{

rows[r] = arraySum(arr2D[r]);

}

return rows;

}

**// part c**

public static boolean isDiverse(int[][] arr2D)

{

int[] sums = rowSums(arr2D);

for(int i = 0; i < sums.length; i++)

{

for(int k = i + 1; k < sums.length; k++)

{

if(sums[i] == sums[k])

{

return false;

}

}

}

return true;

}