GCD ARRAY:

YOU ARE GIVEN ARRAY.AND A EQUATION WHERE a[i]=GCD(i,j) ,where i!=j, IF THE GCD(i,j) IS EQUAL TO i th index then a[i] value becomes its previous value of a[i].

YOU HAVE CHECK ALL THE VALUES IN THE ARRAY OR EQUAL OR NOT. IF ALL VALUES ARE EQUAL THEN PRINT “YES” ELSE PRINT “NO”.

INPUT: FIRST LINE CONSISTS OF TESTCASES

Second line consists of n followed n integers of array.

OUTPUT: output a line ”YES” else “NO”.

SAMPLE INPUT:

1

3 2 3

SAMPLE OUTPUT:

YES