2. write a java program to Count number of trailing zeros in product of array

A simple solution is simply multiply and count trailing 0s in product. This solution may cause integer overflow. A better solution is based on the fact that zeros are formed by a combination of 2 and 5. Hence the number of zeros will depend on the number of pairs of 2’s and 5’s that can be formed.  
Ex.: 8 \* 3 \* 5 \* 23 \* 17 \* 25 \* 4 \* 11  
23 \* 31 \* 51 \* 231 \* 171 \* 52 \* 22 \* 111  
In this example there are 5 twos and 3 fives. Hence, we shall be able to form only 3 pairs of (2\*5). Hence will be 3 Zeros in the product.

import java.util.\*;

import java.lang.\*;

public class Main

{

public static int countZeroso(int[] a, int n)

{

int count2 = 0, count5 = 0;

for (int i = 0; i < n; i++)

{

while (a[i] % 2 == 0)

{

a[i] = a[i] / 2;

count2++;

}

while (a[i] % 5 == 0)

{

a[i] = a[i] / 5;

count5++;

}

}

return (count2 < count5) ? count2 : count5;

}

public static void main(String argc[])

{

int[] a = new int[]{ 10, 100, 20, 30,

50, 91, 12, 80 };

int n = 8;

System.out.println(countZeroso(a, n));

}

}

**Output:**

