2.Write a C Program to generate first N Magic Numbers.

A magic number is defined as a number which can be expressed as a power of 5 or sum of unique powers of 5. First few magic numbers are 5, 25, 30(5 + 25), 125, 130(125 + 5), ….  
Input: n = 1  
Output: 5

Input: n = 2  
Output: 5 25

Input: n = 3  
Output: 5 25 30

Input: n = 8  
Output: 5 25 30 125 130 150 155 625

**Code:**

#include <stdio.h>

#define max 1000000007

long long int magic(int n){

long long int pro=1;

long long res=0;

while(n){

pro=(pro\*5)%max;

if(n&1)

res=(res+pro)%max;

n=n>>1;

}

return res;

}

int main()

{

int n,i;

printf("Enter n :");

scanf("%d",&n);

printf(" the magic numbers are: ");

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

{

printf("%d ",magic(i));

}

return 0;

}

**Output:**

