3. Write an algorithm for multiplication of two matrices.

MATRIX-MULTIPLY (A, B, M, N, P)
Where A is matrix of order M*N, B is matrix of N*P.
1. Take one output matrix C of order M*P
2. for I=1 to M do
3. for J=1 to P do
4. total=0
5. for K=1 to N do
6. total=total+ A[I][K]*B[K][J]
7. C[I][J]=total
8. Exit

Time complexity:- The complexity of a matrix multiplication algorithm is measured by counting the numbers of multiplications. The reason that additions are not counted in such algorithms is that computer multiplications take more time than computer addition. The complexity of the algorithm is

T(n)= O(M.N.P)

4. Write a C program for searching a number in an array (Linear Search).


```
#include<stdio.h>

void main()
{
        int A[50], i, n, num;

        printf("Enter the number of elements in array : ");
        scanf("%d",&n);

        printf("Enter %d numbers: ",n);
        for(i=0;i<n;i++)
        {
                scanf("%d",&A[i]);
        }

        printf("\n Enter number do you want to search in array:");
        scanf("%d",&num);

        for(i=0;i<n;i++)
        {
                if(A[i]==num)
                {
                        printf("\n Number is found");
                        break;
```