9a.

```
#include <stdio.h>
int max(int a, int b, int c, int d) {
    int max = a;
    if (b > max) {
        max = b;
    }
    if (c > max) {
        max = c;
    }
    if (d > max) {
        max = d;
    }
    return max;
}


int main() {
    int a, b, c, d;
    scanf("%d %d %d %d", &a, &b, &c, &d);
    int ans = max(a, b, c, d);
    printf("%d", ans);
    return 0;
}
```

Input (stdin)

3
4
6
5

Your Output (stdout)

6

Expected Output

6

9b.

```
#include <stdio.h>

int fib(int n)
{
   if(n>30)
   return;
   else if(n==0)
   return 0;
   else if(n==1)
   return 1;
   else
   return(fib(n-1)+fib(n-2));
   }
int main()
{
   int n;
   scanf("%d", &n);
   printf("%d", fib(n));
   return 0;
}
```

Input (stdin)
25

Expected Output
75025

9c.

```
#include <stdio.h>

long int fact(long int n)

{

   if((n<0)||(n>15))

   return 0;
```

```
    else if((n==0)||(n==1))
    return 1;
    else
        return(n*fact(n-1));
    }
int main()
{
    long int n;
    scanf("%ld",&n);
    long int res= fact(n);
    printf("%ld",res);
}
```

Input (stdin)

15

Your Output

1307674368000

9d.

```
#include <stdio.h>

int sumOfDigits(int num)
{
    if (num == 0)
    {
        return 0;
    }
    return (num % 10) + sumOfDigits(num / 10);
}
```

```
int calculateResult(int n, int k) {
    // Base case
    if (n == 0) {
        return 0;
    }

    int sum = sumOfDigits(n);
    int c = sum * k;

    // Recursive call
    return c;
}

int main() {
    int n, k;

    // Input values
    printf("Enter two integers (n and k): ");
    scanf("%d%d", &n, &k);

    // Calculate the result using recursion
    int result = calculateResult(n, k);
     printf("%d\n",result);
    int r1= Calres2(result);
    printf("%d",r1);
    return 0;
}
int Calres2(int num)
{
   while(num>0)
    {
    int r2= sumOfDigits(num);
    return sumOfDigits(r2);
  }

}
```

OUTPUT:

Enter two integers (n and k): 148 3

39
3

9 e.

```
#include<stdio.h>
int find_lcm(int,int);
int main()
{
   int a, b, lcm;
    printf("\n\nEnter 2 integers to find LCM of:\n");
    scanf("%d%d", &a, &b);
    lcm = find_lcm(a,b);
    printf("\n\n LCM of %d and %d is: %d\n\n", a, b, lcm);
    return 0;
}
 int find_lcm(int a, int b)
{
    static int temp = 1;
    if(temp%a == 0 && temp%b == 0)
    {
        return temp;
    }
    else
    {
        temp++;
        find_lcm(a,b);
        return temp;
    }
}
```

Output:

```
Enter 2 integers to find LCM of:
70 100
LCM of 70 and 100 is: 700
```

9f.

```
#include <stdio.h>
#include <string.h>
#include <math.h>
```

```c
#include <stdlib.h>
//Complete the following function.

int find_nth_term(int n, int a, int b, int c) {
  int term, t1 = a, t2 = b, t3 = c;
    if (n == 1)
        term = t1;
    else if (n == 2)
        term = t2;
    else if (n == 3)
        term = t3;
    else {
        for (int i = 4; i <= n; i++) {
            term = t1 + t2 + t3;
            t1 = t2;
            t2 = t3;
            t3 = term;
        }
    }
    return term;
}

int main() {
    int n, a, b, c;

    scanf("%d %d %d %d", &n, &a, &b, &c);
    int ans = find_nth_term(n, a, b, c);

    printf("%d", ans);
    return 0;
}
```

Input (stdin)

5
1 2 3

Your Output (stdout)

11

Expected Output

11