Tower of honoi

```c
#include <stdio.h>
#include <time.h>
int main()
{
int n;
clock_t start, end;
double time_taken;
    start = clock();
printf(" enter the no. of disks|n");
scanf(" %d", &n);
int c = TOH (n, 'A', 'c', 'B');
printf("|n");
printf("Total no. of moves = %d|n". c);
    end = clock()-t;
double time_taken = (double) (start -end)/clocks_per_sec;
printf(' It took %f seconds to execute|n", time_taken);
return 0;
}

int TOH ( int n, char source, char temp, char destination)
{
int count;
if (n>0)
{
count = TOH (n-1, source, temp, destination);
printf(" move disk %d from %c to %c|n" ,n, first, destination
count ++;
    if(n>0)
{
        count + =TOH (n-1, temp, destination, source);
        }
        return count;
}
```

Time complexity :- Tower of honoi

$n = 2$ $T = 0.000172$

$n = 3$ $T = 0.000204$

$n = 5$ $T = 0.000343$

$n = 10$ $T = 0.004512$

$n = 15$ $T = 0.149620$

$n \ne 20$ $T =$

$n =$ $T =$