

**Write a program to solve the Tower of Hanoi problem.**

**The program takes an input, n, which represents the number of discs. There are three poles. It gives an output which tells us the sequence of moves to make .i.e.**

```
Move from pole 1 to pole 3  
Move from pole 1 to pole 2  
Move from pole 3 to pole 2
```

**e.t.c.**

### **Hint:**

**Use recursion to reduce the amount of problem you are working on, until you hit a base case. For example, if you wish to move from pole 1 to pole 3, start with:**

```
Moving everything above to pole 2  
Moving the last disc to pole 3  
Moving the items in pole 2 to pole 3
```

**So for the first and third steps, you are working with a problem involving n-1 discs and not n discs.**

**The base case, if  $n = 1$ , simply involves moving the item directly to the destination.**

**Play Tower of Hanoi online:**

<https://www.mathsisfun.com/games/towerofhanoi.html>