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Question 1: How many disks can you handle with a timeout of 1 minute?
I can handle 5 disks.
In fact, using the command: **telingo hanoi.lp towers03.lp**
We can see that for 6 disks it takes a time of 109 seconds equals approximately 1 min e 49 seconds so the maximum of disks it can handle with a timeout of 1 minute is 5.

Question 2: For n=2 the solution takes 3 steps, for n=3 it takes 7 steps. Use the recursive relation above to find a formula for the length of the solution for an arbitrary n.
The length of solution will follow the formula 2^n-1 where n=number of the disks.
Because we know that the algorithm is:
If the disks are initially in A and we want to move them in C
1) Move the first n−1 disks from pole A to pole B using C.
2) Move the largest disk (disk n) from pole A to pole C.
3) Move the n−1 disks from pole B to pole C using A.
So we need f(n-1) moves for the first step, 1 for the second, f(n-1) for the third (where f is a function of the number of disks.
Thus,
Total moves= f(n-1)+ 1 + f(n-1) = 2*f(n-1)+ 1
In addition, we know that f(1)=1 (because obviously to move one disk we need just one move).
So f(2)=2*f(1)+1= 2*1+1=3
f(3)=2*f(2)+1= 2*3+1=7
f(4)=2*f(3)+1= 2*7+1=15
f(5)=2*f(4)+1= 2*15+1=31
f(6)=2*f(5)+1= 2*31+1=63
So ,observing the results we can derive a general formula for the number of moves that is f(n)=2^n-1.

Question 3: For n=4 how many steps are required if, instead of 3 poles, we have 5 poles (a, b, c, d ,e) available? It requires 7 steps. But a notable change is that now we have more models, that makes sense because now we have more freedom on the choice of what pole to use as auxiliary.

Question 4: if we implement this control rule, is there any variation in the execution time?
With the constraint Time : 2.572s

Without the constraint Time : 2.735s
It is normal that the execution time decreases as I avoid making unnecessary moves.