(b) On next page

(a)

```
void Hanoi(int n) {
                                                        void H2(int n, Node * begin, Node * aux, Node * end) 
       if(!s\rightarrow v\rightarrow isEmpty() \&\& n >= 1) {
                                                             if(n == 1)
                                                                  moveNext(begin, end);
            Hanoi(n-1);
                                                             else if(n >= 2) {
            moveNext(s, a2);
                                                                  H2(n-1, begin, aux, end);
            H1(n-1, a3, a2, a1);
                                                                  moveNext(begin, aux);
            moveNext(a2,a3);
                                                                  H1(n-1, end, aux, begin);
            if(!s->v->isEmpty())
                                                                  moveNext(aux, end);
                  H2(n-1, a1, a2, a3);
                                                                  H2(n-1, begin, aux, end);
            else
                  Hanoi(n-1);
       } else if(s->v->isEmpty()) {
                                                        void H1(int n, Node * begin, Node * aux, Node * end) {
            if(n == 0)
                                                             if(n == 1)
                  moveNext(a3,d);
                                                                  moveNext(begin, end);
            else if(n >= 1) {
                                                             else if(n >= 2) {
                                                                  H2(n-1, begin, end, aux);
                  moveNext(a3, d);
                                                                  moveNext(begin, end);
                  H2(n-1, a1, a2, a3);
                                                                  H2(n-1, aux, begin, end);
                  moveNext(a1, a2);
                  H1(n-1, a3, a2, a1);
                  moveNext(a2, a3);
                  Hanoi(n-1);
       recursiveCalls++;
Time Complexity
     Where Hanoi(n) is T(n),
     Hanoi(n) = 3 \cdot Hanoi(n-1) + 2 \cdot Hop(n-1) + f(n) \Rightarrow O(3^n)
          Explanation
               3 \cdot Hanoi(n-1) line 1, 3, and 20 of Hanoi function
                     \Rightarrow O\left(3^{\frac{n}{1}}\right) \Rightarrow O(3^n)
               2 \cdot Hop(n-1) H1 and H2 call from both stack is empty & stack is not empty
                     \Rightarrow O\left(2^{\frac{n}{1}}\right) \Rightarrow O(2^n)
               f(n) = \text{can either be 2 or 3-4 moves}
                    where it's 2 moves, stack is not emtpy (line 4 and 6 show this)
                     where it's 3-4 moves, stack is empty (line 13, 15, 17, and 19)
                     \Rightarrow 0(1)
               3 \cdot Hanoi(n-1) in this case has the largest long-term growth
               \therefore Hanoi(n) = O(3^n)
Space Complexity
     Where stack size is the number of disks n
     \# of array stacks \cdot stack size + atomic moves per recursive call \cdot recursive calls
          =5 \cdot n + 2 \cdot [3(n-1)] + 4 \cdot [3(n-1)]
stack is not empty -1 \cdot [3(n-1)]
          = O(n) linear growth
```

	n = 5	n = 6	n = 7	n = 8	n = 9	n = 10
> 1 -> Aux1						
-> 1 -> Aux2 -> 1 -> Aux3	First 100 moves Remaining moves		First 100 moves Last 100 moves			
-> 1 -> Dest	Start -> 1 -> Aux1 Aux3 -> 3 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3	Start -> 1 -> Aux1 Aux2 -> 1 -> Aux3 Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1	Start -> 1 -> Aux1 Aux2 -> 1 -> Aux3 Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1	Start -> 1 -> Aux1 Aux2 -> 1 -> Aux3 Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1	Start -> 1 -> Aux1 Aux2 -> 1 -> Aux3 Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1	Start -> 1 -> Aux1 Aux2 -> 1 -> Au Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Au
	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1 Start -> 2 -> Aux1 Aux2 -> 2 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 2 -> Aux3 Start -> 2 -> Aux1 Aux1 -> 1 -> Aux2	Aux2 -> 1 -> Aux3 Aux2 -> 2 -> Aux3 Start -> 2 -> Aux1 Aux1 -> 1 -> Aux2	Aux2 -> 1 -> Aux3 Aux2 -> 2 -> Aux3 Start -> 2 -> Aux1 Aux1 -> 1 -> Aux2	Aux2 -> 1 -> Aux3 Aux2 -> 2 -> Aux3 Start -> 2 -> Aux1 Aux1 -> 1 -> Aux2	Aux2 -> 1 -> Aux3 Aux2 -> 2 -> Au Start -> 2 -> Aux1 Aux1 -> 1 -> Au
> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Aux3	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Aux3	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Aux3	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Aux3	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Au
> 1 -> Aux2 -> 1 -> Aux3	Aux3 -> 1 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 2 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 1 -> Aux1 Aux1 -> 3 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux1 -> 3 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux1 -> 3 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux1 -> 3 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux1 -> 3 -> Au Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Au
> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Au
> 2 -> Aux2 > 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux2 -> 5 -> Aux3 Start -> 3 -> Aux1 Aux3 -> 5 -> Dest	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Aux1 Start -> 3 -> Aux1 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Aux1 Start -> 3 -> Aux1 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Aux1 Start -> 3 -> Aux1 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Aux1 Start -> 3 -> Aux1 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Au Start -> 3 -> Aux1 Aux2 -> 1 -> Au
> 2 -> Aux3	Aux1 -> 3 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 3 -> Aux2 Aux1 -> 2 -> Aux2	Aux1 -> 3 -> Aux2 Aux1 -> 2 -> Aux2	Aux1 -> 3 -> Aux2 Aux1 -> 2 -> Aux2	Aux1 -> 3 -> Aux2 Aux1 -> 2 -> Aux2	Aux1 -> 3 -> Aux2 Aux1 -> 2 -> Au
> 2 -> Dest > 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 2 -> Aux2	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Au Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Au
> 1 -> Aux3 > 1 -> Dest	Aux3 -> 2 -> Aux1 Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 2 -> Aux3	Aux3 -> 2 -> Aux1 Aux3 -> 4 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 2 -> Aux1 Aux3 -> 4 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 2 -> Aux1 Aux3 -> 4 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 2 -> Aux1 Aux3 -> 4 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 2 -> Aux1 Aux3 -> 4 -> Au Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Au
/1-/ Dest	Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Au
	Aux2 -> 3 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 3 -> Aux2	Aux2 -> 3 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 3 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 3 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 3 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 3 -> Aux3 Aux2 -> 2 -> Au Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Au
> 1 -> Aux1 > 1 -> Aux2	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Au
1 -> Aux3	Aux1 -> 2 -> Aux2 Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 2 -> Aux1	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Au Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Au
2 -> Aux1 > 2 -> Aux2	Aux2 -> 2 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 2 -> Aux3 Aux2 -> 3 -> Aux3	Aux2 -> 2 -> Aux3 Aux2 -> 3 -> Aux3	Aux2 -> 2 -> Aux3 Aux2 -> 3 -> Aux3	Aux2 -> 2 -> Aux3 Aux2 -> 3 -> Aux3	Aux2 -> 2 -> Aux3 Aux2 -> 3 -> Au
> 1 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 3 -> Aux3	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Au Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Au
2 -> Aux3 1 -> Aux2	Start -> 4 -> Aux1 Aux1 -> 1 -> Aux2 Aux1 -> 4 -> Aux2 Aux2 -> 1 -> Aux3	Start -> 4 -> Aux1 Aux1 -> 2 -> Aux2 Aux1 -> 4 -> Aux2 Aux3 -> 1 -> Aux1	Start -> 4 -> Aux1 Aux1 -> 2 -> Aux2 Aux1 -> 4 -> Aux2 Aux3 -> 1 -> Aux1	Start -> 4 -> Aux1 Aux1 -> 2 -> Aux2 Aux1 -> 4 -> Aux2 Aux3 -> 1 -> Aux1	Start -> 4 -> Aux1 Aux1 -> 2 -> Aux2 Aux1 -> 4 -> Aux2 Aux3 -> 1 -> Aux1	Start -> 4 -> Aux1 Aux1 -> 2 -> Au Aux1 -> 4 -> Aux2 Aux3 -> 1 -> Au
1 -> Aux3 3 -> Aux1	Aux3 -> 1 -> Aux1 Aux1 -> 2 -> Aux2	Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Au
3 -> Aux2	Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 2 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3	Aux1->1->Aux2 Aux3->3->Aux1 Aux3->2->Aux1 Aux2->1->Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux2
1 -> Aux1 1 -> Aux2	Aux2 -> 1 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Au
2 -> Aux1	Aux1 -> 2 -> Aux2 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 4 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 2 -> Au Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Au
1 -> Aux3 1 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> A
3 -> Aux3	Aux3 -> 3 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Aux1	Aux3 -> 3 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 3 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 3 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 3 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 3 -> Aux1 Aux2 -> 1 -> A Aux2 -> 1 -> Aux3 Aux3 -> 1 -> A
3 -> Dest 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3	Aux3 -> 1 -> Aux1 Aux2 -> 5 -> Aux3	Aux3 -> 1 -> Aux1 Aux2 -> 5 -> Aux3	Aux3 -> 1 -> Aux1 Aux2 -> 5 -> Aux3	Aux3 -> 1 -> Aux1 Aux2 -> 5 -> Aux3	Aux3 -> 1 -> Aux1 Aux2 -> 5 -> A
1 -> Aux3	Aux2 -> 2 -> Aux3 Aux1 -> 2 -> Aux2 Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1	Aux2 -> 2 -> Aux3 Aux3 -> 5 -> Dest Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux3 -> 5 -> Dest Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux3 -> 5 -> Dest Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux3 -> 5 -> Dest Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux3 -> 5 -> E Aux1 -> 1 -> Aux2 Aux1 -> 1 -> A
2 -> Aux2 1 -> Aux1	Aux3 -> 2 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3 Aux3 -> 3 -> Aux1	Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 2 -> Aux2	Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 2 -> Aux2	Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 2 -> Aux2	Aux3 -> 2 -> Aux1	Aux3 -> 2 -> Aux1 Aux2 -> 1 -> A Aux2 -> 1 -> Aux3 Aux1 -> 2 -> A
2 -> Aux3 2 -> Dest	Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> A
1 -> Aux2	Aux2 -> 4 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 2 -> Aux3	Aux2 -> 4 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 4 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 4 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 4 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 4 -> Aux3 Aux2 -> 2 -> A Aux1 -> 1 -> Aux2 Aux1 -> 1 -> A
1 -> Aux3 1 -> Dest	Aux2 -> 1 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> A
1 > Dest	Aux1 -> 2 -> Aux2 Aux3 -> 2 -> Aux1 Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3	Aux1 -> 2 -> Aux2 Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 3 -> A Aux3 -> 1 -> Aux1 Aux3 -> 1 -> A
	Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux1 -> 1 -> A
1 -> Aux1 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux2 -> 4 -> Aux3 Aux2 -> 1 -> Aux3 Aux3 -> 4 -> Dest	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> A Aux2 -> 1 -> Aux3 Aux2 -> 1 -> A
1 -> Aux3	Aux1 -> 3 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1	Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1	Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1	Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1	Aux1 -> 3 -> Aux2 Aux3 -> 1 -> A
2 -> Aux1 > 2 -> Aux2	Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 2 -> Aux2	Aux3 -> 1 -> Aux1 Aux2 -> 3 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux2 -> 3 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux2 -> 3 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux2 -> 3 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux2 -> 3 -> Aux1 Aux1 -> 1 -> Aux1 -> -
> 1 -> Aux1 > 2 -> Aux3	Aux3 -> 2 -> Aux1 Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 2 -> Aux3	Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 2 -> Aux2	Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 2 -> Aux2	Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 2 -> Aux2	Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 2 -> Aux2	Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux1 Aux2 -> 1 -> Aux2 Au
> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Au
> 1 -> Aux3 - 3 -> Aux1	Aux2 -> 3 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 3 -> Aux2	Aux2 -> 3 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 3 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 3 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 3 -> Aux3 Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 3 -> Aux3 Aux2 -> 2 -> Au Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Au
> 3 -> Aux2	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> A
> 1 -> Aux1 > 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 2 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 4 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 4 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 4 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 4 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 4 -> A Aux3 -> 1 -> Aux1 Aux3 -> 1 -> A
> 2 -> Aux1	Aux2 -> 2 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 2 -> Aux3 Aux1 -> 1 -> A
> 1 -> Aux3 > 1 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 3 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> A Aux2 -> 1 -> Aux3 Aux2 -> 1 -> A
> 3 -> Aux3 > 1 -> Aux2	Start -> 5 -> Aux1 Aux3 -> 3 -> Dest	Start -> 5 -> Aux1	Start -> 5 -> Aux1	Start -> 5 -> Aux1 Aux1 -> 2 -> Aux2	Start -> 5 -> Aux1	Start -> 5 -> Aux1 Aux1 -> 2 -> A
1 -> Aux3	Aux1 -> 5 -> Aux2 Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3	Aux1 -> 5 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 5 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 5 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 5 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 5 -> Aux2 Aux3 -> 1 -> A Aux3 -> 1 -> Aux1 Aux1 -> 1 -> A
> 2 -> Aux2 > 1 -> Aux1	Aux1 -> 1 -> Aux2 Aux1 -> 2 -> Aux2 Aux3 -> 2 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3	Aux1->1->Aux2 Aux3->3->Aux1 Aux3->2->Aux1 Aux2->1->Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> 4 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> 4
> 2 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 2 -> Aux3	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux3 -> 1 -> A
1 -> Aux2 1 -> Aux3	Aux1 -> 2 -> Aux2 Aux3 -> 2 -> Dest Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux2 -> 2 -> A Aux3 -> 1 -> Aux1 Aux1 -> 1 -> A
4 -> Aux1	Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> A
4 -> Aux2 1 -> Aux1	Aux3 -> 3 -> Aux1 Aux3 -> 1 -> Dest Aux2 -> 1 -> Aux3	Aux3 -> 3 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 3 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 3 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 3 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux3 -> 1 -> Aux1	Aux3 -> 3 -> Aux1 Aux2 -> 1 -> A Aux2 -> 1 -> Aux3 Aux3 -> 1 -> A
1 -> Aux2 2 -> Aux1	Aux3 -> 1 -> Aux1 Aux2 -> 2 -> Aux3	Aux3 -> 1 -> Aux1 Aux2 -> 4 -> Aux3 Aux2 -> 2 -> Aux3 Aux3 -> 4 -> Dest	Aux3 -> 1 -> Aux1 Aux2 -> 4 -> Aux3 Aux2 -> 2 -> Aux3 Aux3 -> 4 -> Dest	Aux3 -> 1 -> Aux1 Aux2 -> 4 -> Aux3 Aux2 -> 2 -> Aux3 Aux3 -> 4 -> Dest	Aux3 -> 1 -> Aux1 Aux2 -> 4 -> Aux3 Aux2 -> 2 -> Aux3 Aux3 -> 4 -> Dest	Aux3 -> 1 -> Aux1 Aux2 -> 4 -> 4 Aux2 -> 2 -> Aux3 Aux3 -> 4 -> 1
1 -> Aux3	Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> A
2 -> Aux2 1 -> Aux1	Aux2 -> 1 -> Aux3 Aux1 -> 3 -> Aux2	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 3 -> Aux2 Aux1 -> 2 -> Aux2	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 3 -> Aux2 Aux1 -> 2 -> Aux2	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 3 -> Aux2 Aux1 -> 2 -> Aux2	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3 Aux1 -> 3 -> Aux2 Aux1 -> 2 -> Aux2	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux1 -> 3 -> Aux2 -> 2 -> 4ux1 -> 4ux1 -> 2 -> 4ux1 -> 4ux1 -> 2 -> 4ux1
1 -> Aux2	Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux3 -> 1 ->
3 -> Aux1 1 -> Aux3	Aux1 -> 1 -> Aux2 Aux3 -> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 2 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 2 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 2 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux2 -> 2 -> Aux3 Aux3 -> 2 -> Aux1 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux2 -> 2 -> Aux3 -> 2 -> Aux1 Aux1 -> 1 ->
1 -> Aux1	Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux2 -> 1 ->
2 -> Aux3 1 -> Aux2	Aux1 -> 2 -> Aux2 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 3 -> Aux2 Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 3 -> . Aux3 -> 1 -> Aux1 Aux3 -> 1 -> .
2 -> Aux1 1 -> Aux3	Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2 Aux3 -> 4 -> Aux1 Aux3 -> 2 -> Aux1	Aux1 -> 1 -> Aux2 Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux1 -> 1 ->
1 -> Aux1	Aux3 -> 4 -> Aux1 Aux2 -> 1 -> Aux3	Aux3 -> 4 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 4 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux1 Aux2 -> 1 -> Aux1 Aux2 -> 1 -> Aux3	Aux3 -> 4 -> Aux1 Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 4 -> Aux1 Aux3 -> 2 -> Aux2 -> 1 -> Aux3 Aux2 -> 1 ->
4 -> Aux3 4 -> Dest	Aux3 -> 1 -> Aux1 Aux2 -> 2 -> Aux3	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux2 -> 2 -> Aux3 Aux2 -> 3 -> Aux3	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux2 -> 2 -> Aux3 Aux2 -> 3 -> Aux3	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux2 -> 2 -> Aux3 Aux2 -> 3 -> Aux3	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux1 Aux2 -> 2 -> Aux3 Aux2 -> 3 -> Aux3	Aux3 -> 1 -> Aux1 Aux3 -> 1 -> Aux2 -> 2 -> Aux3 Aux2 -> 3 ->
1 -> Aux2	Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Dest	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Dest	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Dest	Aux1 -> 1 -> Aux2 Aux3 -> 3 -> Dest	Aux1 -> 1 -> Aux2 Aux3 -> 3 ->
1 -> Aux3 2 -> Aux2	Aux3 -> 2 -> Aux1 Aux2 -> 1 -> Aux3	Aux3 -> 2 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 2 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 2 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 2 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 1 -> Aux3 Aux2 -> 1 -> Aux3	Aux3 -> 2 -> Aux1 Aux1 -> 1 -> Aux2 -> 1 -> Aux3 Aux2 -> 1 ->
1 -> Aux1	Aux3 -> 1 -> Aux1	Aux3 -> 1 -> Aux1 Aux1 -> 2 -> Aux2	Aux3 -> 1 -> Aux1 Aux1 -> 2 -> Aux2	Aux3 -> 1 -> Aux1 Aux1 -> 2 -> Aux2	Aux3 -> 1 -> Aux1 Aux1 -> 2 -> Aux2	Aux3 -> 1 -> Aux1 Aux1 -> 2 ->
2 -> Aux3 1 -> Aux2	Aux2 -> 3 -> Aux3 Aux1 -> 1 -> Aux2	Aux2 -> 3 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 2 -> Aux3	Aux2 -> 3 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 2 -> Aux3	Aux2 -> 3 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 2 -> Aux3	Aux2 -> 3 -> Aux3 Aux3 -> 1 -> Aux1 Aux1 -> 1 -> Aux2 Aux2 -> 2 -> Aux3	Aux2 -> 3 -> Aux3 Aux3 -> 1 -> Aux1 -> 1 -> Aux2 Aux2 -> 2 ->
1 -> Aux3 3 -> Aux2	Aux2 -> 1 -> Aux3	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Dest	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Dest Aux1 -> 2 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Dest	Aux2 -> 1 -> Aux3 Aux3 -> 2 -> Dest Aux1 -> 2 -> Aux2 Aux1 -> 1 -> Aux2	Aux2 -> 1 -> Aux3 Aux3 -> 2 ->
1 -> Aux1	Aux1 -> 2 -> Aux2 Aux3 -> 1 -> Aux1	Aux1 -> 2 -> Aux2 Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3	Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3	Aux1 -> 2 -> Aux2 Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3	Aux3 -> 1 -> Aux1 Aux2 -> 1 -> Aux3	Aux1 -> 2 -> Aux2 Aux1 -> 1 -> 4 Aux3 -> 1 -> Aux1 Aux2 -> 1 -> 4
1 -> Aux2 2 -> Aux1	Aux1 -> 1 -> Aux2	Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Dest	Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Dest	Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Dest	Aux1 -> 1 -> Aux2 Aux3 -> 1 -> Dest	Aux1 -> 1 -> Aux2 Aux3 -> 1 -> I
1 -> Aux3						
1 -> Aux1 3 -> Aux3						
3 -> Dest						
1 -> Aux2 1 -> Aux3						
2 -> Aux2 1 -> Aux1						
2 -> Aux3						
2 -> Dest 1 -> Aux2						
1 -> Aux3 1 -> Dest						