```c
#include <stdio.h>

int isOrbiting(int *arr, int n, int i0){
    int idx = i0, i;
    // If we are to reach the original index, it will happen within
    // n steps or less otherwise it will never happen
    for(i = 0; i < n; i++){
        idx += (arr[idx] + 1);
        idx %= n; // Wrap around
        if(idx == i0) // Nice!
            return i + 1;
    }
    return 0;
}

int main(){
    int n, i, orbit;
    scanf("%d", &n);
    int arr[n];
    for(i = 0; i < n; i++)
        scanf("%d", &arr[i]);
    for(i = 0; i < n; i++){
        if(orbit = isOrbiting(arr, n, i))
            printf("%d", orbit);
        else
            printf("-1");
        if(i < n-1) printf("\n"); // No trailing newlines
    }
}
```