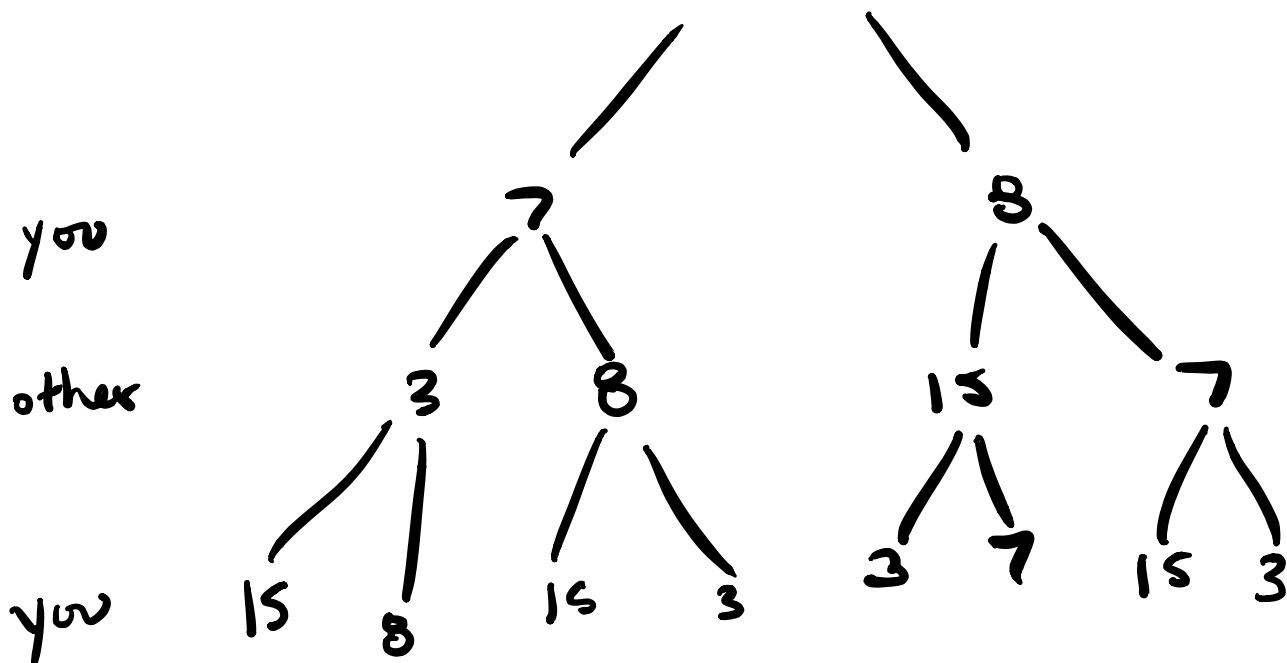


# ARRAY COIN GAME

5 3 7 10  $\rightarrow$  15

- each turn, select either first or last number in row (you get that value).
- what's maximum if you go first?

8 15 3 7  $\rightarrow$  22



$i = 0$ 
 $\quad \quad \quad 5 \quad 3 \quad 7 \quad 10$   
 $\quad \quad \quad i \quad \quad \quad N-i$

- Compare last, first
- Choose one
- choose last, first for opponent
- choose last, first
- ⋮

- when it's down to two, choose the bigger number

- previous level, choose greater of left/right branch

```
def choose(arr):  
    if len(arr) == 2:  
        return max(arr[0], arr[-1])  
    else:  
        return  
        max(arr[0] + choose(arr[1:]),  
           arr[-1] + choose(arr[:-1]))
```