$$\text{all\_comb}(tval, 0, n)$$

$$\text{all\_comb}(tval, 1, n) \qquad \text{all\_comb}(tval, 1, n)$$

$$\text{all\_comb}(tval, 2, n) \quad \text{all\_comb}(tval, 2, n) \text{ same} \qquad \text{same}.$$

Claim: For all $n \in N$, $0 \leq begin \leq n$, the function all_comb on the ~~book~~
Parameters $(tval, begin, n)$ is called 2^{begin} times.

Proof: First, we show that for a fixed n, and $\forall begin \leq n$, $begin \geq 0$,
the function all_comb $(tval, begin, n)$ is called 2^{begin} times. The proof
is by mathematical induction on $begin$.

Base Case: $begin = 0$. If $n = 0$, the if condn. on line 4 would be satisfied.
It's easy to see then, that only the newline on line 9 will be
printed then, and the function would return ~~nel no~~ void.

• If $n \geq 0$, then the else block on lines 11–18 will execute. The
function is called twice ~~o~~ by lines 15, 17. On both cases, the function
parameters are $(tval, begin + 1 = 1, n)$. It's easy to see that the value of
begin can never again be 0, because otherwise, when the function