

1. Idea:

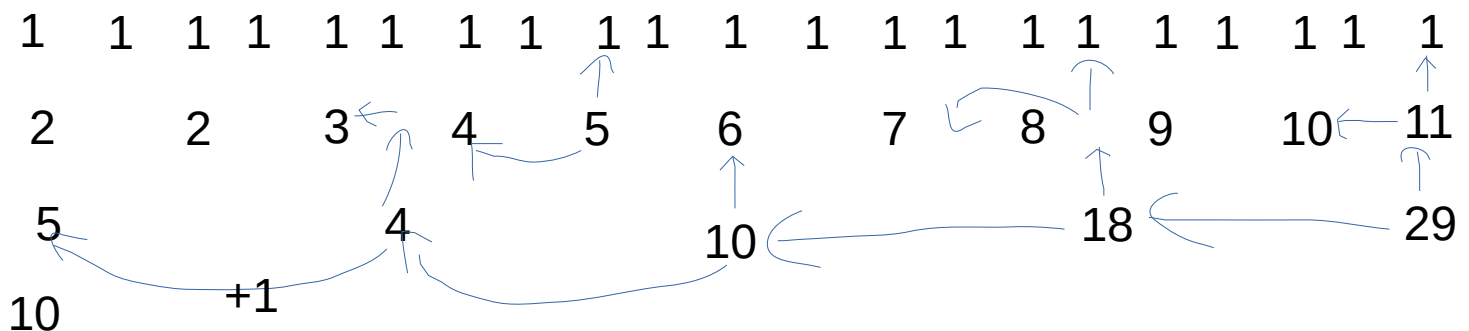
- Tree
- depth first
- possible later optimization with parallel divide and conquer
- if legal leaf is reached → add to set `HashSet<u32 x 8>`
- use structure here to aggregate the different coins to a bag

2. Idea

Dynamic programming:

- from size 1 to n
- using the old solutions when possible → `HashMap` with `<left_size, possible_combinations_to_fill>`
- else expand like a node
- use iteration instead of recursion:
- use work stack
 - if empty push 1 to n on it
 -

!! the problem here is that that the DIFFERENT ways are on interest



$$20 \cdot 1$$

$$18 \cdot 1 + 1 \cdot 2$$

..

$$2 \cdot 1 + 8 \cdot 2$$

$$10 \cdot 2$$

$$4 \cdot 5$$

$$3 \cdot 5 + \{1 \cdot 2 + 3 \cdot 1, 2 \cdot 2 + 1 \cdot 1, 5 \cdot 1\} = 3$$

$$2 \cdot 5 + \{10 \cdot 1, \dots, 5 \cdot 2\} = 6$$

$$1 \cdot 5 + \{15 \cdot 1 + 0 \cdot 2, 1 \cdot 1 + 7 \cdot 2\} = 8$$

$$== 11$$