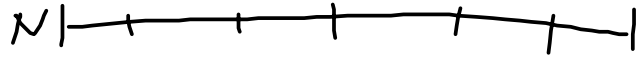


Übung 5

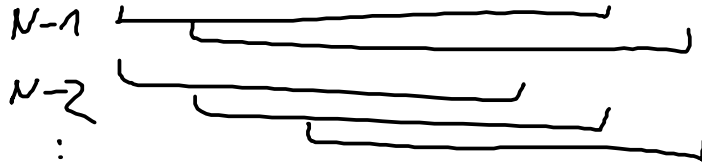
13

$$A'_N = \{(1, N-1), (2, N), (3, N-2), \dots, (N, 1)\}$$

$$P = \{0, 1, 2, \dots, N\}$$



$$A_N = \{(1, N), \dots, (N, 1)\}$$



$a_n = \#$ ^{innere} Knoten im Aufrufbaum auf A'_n

$$a_3 = 3$$

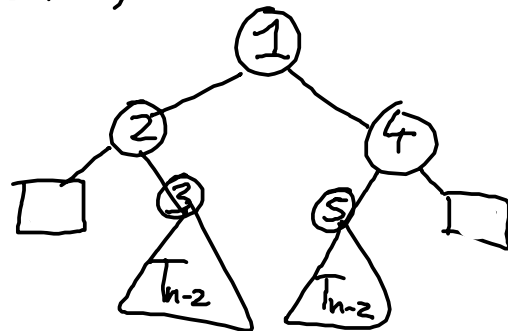
$$a_4 = 5$$

$$\leadsto a_n = \Theta(\sqrt{2}^n)$$

$$a_n = \left(\frac{1}{4}b_n + \frac{3}{4}\right) 2^{\lfloor \frac{n}{2} \rfloor} - 3$$

$$b_n = 5 - 2(n \bmod 2)$$

$$a_n = 2a_{n-2} + 3 \quad (n \geq 5)$$

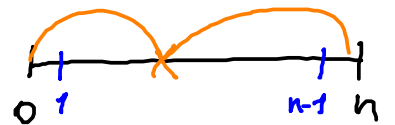


Schritt	X	A
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1	$\{0, n\}$	$A'_n \setminus \{(n, 1)\}$
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2	$\{0, n-1, n\}$	$\{(1, n-2), (2, n), \dots, (n-1, 1)\}$
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3	$\{0, \underbrace{1, n-1, n}\}$	$\{(1, n-3), (2, n), \dots, (n-2, 1)\} = A'$
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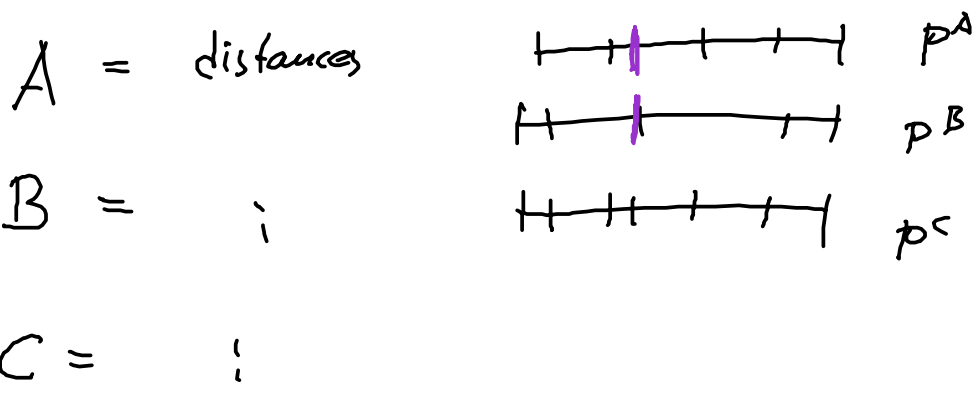


$$A'_{n-2} = \{(1, n-3), (2, n-2), \dots, (n-2, 1)\}$$

In A' sind Distanzen von 0 zu k und k zu n
für $k \in [2..n-2]$

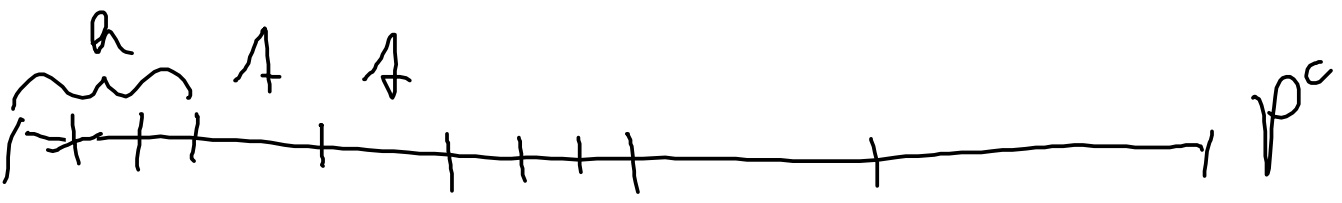
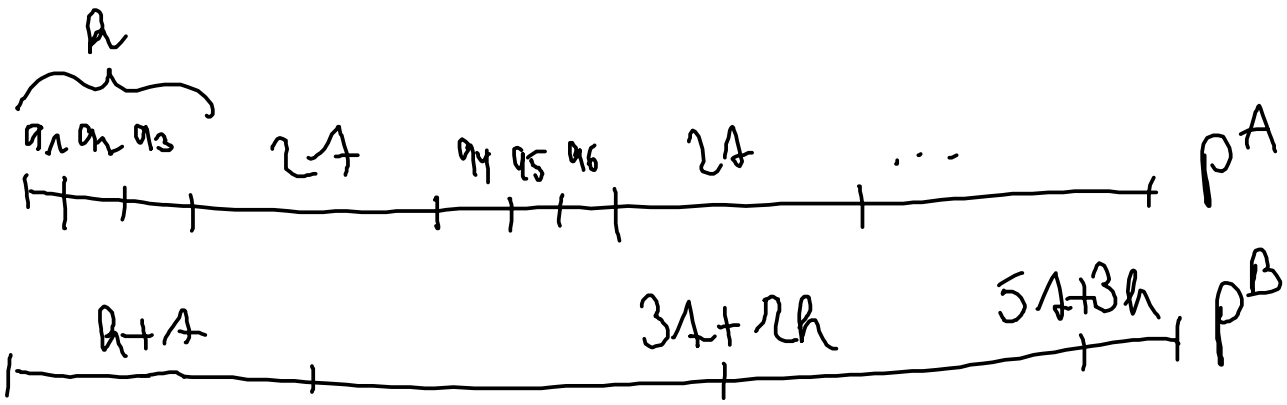
$$\text{d.h. } A'_{n-2} = A' \setminus \{(k, 2) : k \in [2..n-3]\}$$

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3-Partition $q_1, \dots, q_n \in \mathbb{N}$ $h = \frac{\sum q_i}{n}$ $S = n \cdot h$
 $q_i \in (B/4, B/2)$ $T = (n+1) \cdot S$

a.



$p^B \in \{i \cdot h + j \cdot A\}$

$p^B \subseteq p^C \Rightarrow$ als Summe von A, q_i darstellbar