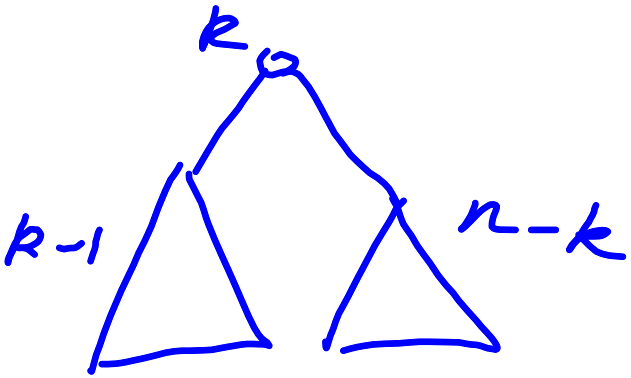



$$\sum_{k=1}^{n} EI(k-1) = EI(0)+EI(1) + \dots EI(n-1)$$

$$\sum_{k=1}^{n} EI(n-k) = EI(n-1)+EI(n-2) + \dots EI(1)+EI(0)$$

$$E\,I(n) = n + \frac{1}{n} \cdot 2 \cdot \sum_{k=1}^{n} E\,I(k-1)$$

$$n \cdot E\,I(n) = n^2 + 2 \cdot \sum_{k=1}^{n} E\,I(k-1)$$

$$(n+1) \cdot E\,I(n+1) = (n+1)^2 + 2 \cdot \sum_{k=1}^{n+1} E\,I(k-1)$$

$$(n+1) \cdot E\,I(n+1) - n \cdot E\,I(n)$$

$$= 2n+1 + 2 \cdot E\,I(n)$$

$$(n+1) \cdot E\,I(n+1) = 2n+1 + (n+2) \cdot E\,I(n)$$

$$(n+1)EI(n+1) = (n+2)EI(n) + 2n+1$$

$$\frac{EI(n+1)}{n+2} = \frac{EI(n)}{n+1} + \frac{2n+1}{(n+1)(n+2)}$$

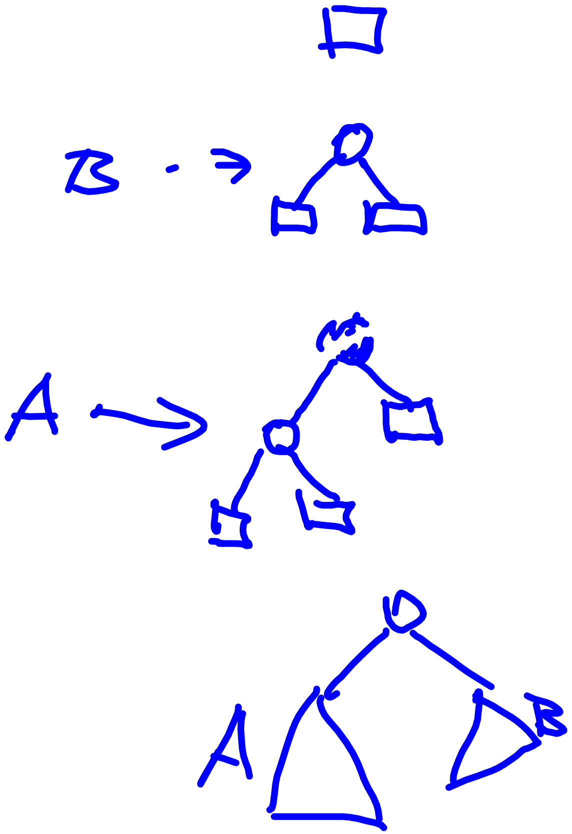
$$\frac{EI(n)}{n+1} = \frac{EI(n-1)}{n} + \frac{2(n-1)+1}{n \cdot n+1}$$

$$\vdots$$

$$\frac{EI(2)}{3} = \frac{EI(1)}{2} \cdot \frac{3}{2 \cdot 3}$$

$$\frac{EI(1)}{2} = \frac{EI(0)}{1} + \frac{1}{1 \cdot 2}$$

$$\frac{E\,I(n)}{n+1} = \sum_{i=1}^{n} \frac{2i-1}{i\cdot(i+1)}$$

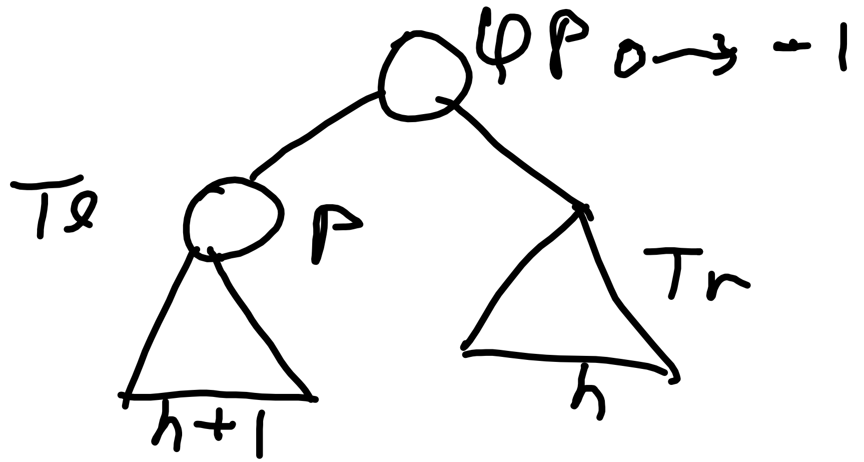



| height | # leaves |
|---|---|
| 0 | 1 |
| 1 | 2 |
| 2 | 3 |
| 3 | 5 |
| ⋮ | |
| $h+2$ | $F_h + F_{h+1}$ |

$$\frac{1}{\sqrt{5}}\left(\left(\frac{1+\sqrt{5}}{2}\right)^2-\left(\frac{1-\sqrt{5}}{2}\right)^2\right)$$

$$\frac{1}{\sqrt{5}}\cdot\frac{1+5+2\sqrt{5}-(1+5-2\sqrt{5})}{4}$$

$$=1$$


φP 0 → -1
Tl
P
Tr
h+1
h