

$$3 \ 6 \ 3$$

$$0 \ 3 \times \ 3$$

$$1 \ 2 \ 3 \ 4 \ 5$$

$$1 \quad 3 \ 4$$

$$\begin{array}{c} \text{---} \\ \text{---} \end{array} \quad \begin{array}{c} \text{---} \\ \text{---} \end{array}$$

$$3 \ 5$$

$$-7 \quad -2 \quad 3 \quad 8 \quad 13$$

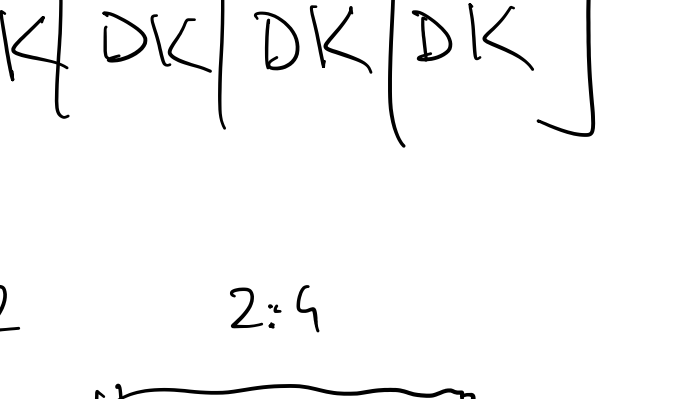
$$D \quad K$$



$$1 \ 2 \ 1$$

$$D \ K \ \{ \ D \ K$$

$$\text{best: } \begin{array}{l} \text{num pieces} \\ \text{num } D \\ \text{num } K \end{array}$$



$$[DK|DK|DK|DK]$$

$$1:2 \quad 2:4$$

$$DKK|DDKKKK$$

$$3:6$$

$$D \ K$$

$$\begin{array}{l} 1:2 \\ 2:3 \\ 3:6 \end{array} \quad \begin{array}{c} 0 \rightarrow 3 \quad 6 \quad 3 \end{array}$$

$$1+2 \mid 2*(1+2) \mid$$

$$3:6 \Rightarrow \underbrace{1:3}_{\text{jump}}$$

$$3:7 = 1$$

$$\frac{d}{k} = \frac{d'}{k'}$$



$$a_1 \dots a_{2k-1}$$

$$b_1 \dots b_k$$

$$b_i = \text{median of } a_1 \dots a_{2i-1}$$

$$\begin{array}{c} x \\ \downarrow \\ x \end{array} \quad \begin{array}{c} x \quad y \quad z \\ \underbrace{\hspace{1cm}} \\ b_1 \quad b_2 \end{array} \quad k-2$$

$$\begin{array}{c} 3 \quad 2 \quad 5 \\ \underbrace{\hspace{1cm}} \\ 3 \quad 3 \end{array}$$

$$3 \leq$$

$$6 \quad 2 \quad 1 \quad 3$$

$$\begin{array}{c} 6 \ 2 \ 1 \\ \downarrow \\ 1 \end{array} \quad \begin{array}{c} <2 \\ <1 <1 \end{array} \quad \begin{array}{c} 3 \\ 3* \geq 3 \end{array} \quad \square$$

$$6 \ 2 \ 1$$

$$3 \leq 3 \geq 3 \leq 3 \geq 3$$

$$3$$

$$2 \quad 1 \quad 2 \quad 3$$

$$\begin{array}{c} 2 \quad 1 \leq 1 \geq 2 \geq 2 \geq 3 \geq 3 \geq 3 \\ \underbrace{\hspace{1cm}} \quad \underbrace{\hspace{1cm}} \quad \square \quad \square \end{array}$$

$$\leq \quad \square \quad \geq$$

$$5 \quad 4 \quad 2$$

$$\begin{array}{c} 5 \quad 4 \leq 4 \leq 2 \leq 2 \\ \downarrow \\ 2 \end{array}$$

$$\begin{array}{c} n \leq x \\ \leftarrow \mid \bullet \bullet \right\} \bullet \mid \rightarrow \\ \vdots \end{array}$$

$$2 \quad 1 \quad 2 \quad 3$$

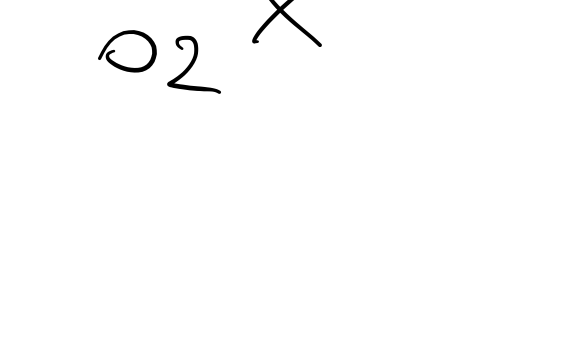
$$2 \mid *|1 \ 2 \mid *|1 \ 2|**$$

$$*|1 \ 2 \ 3|***$$

$$2 \quad 1 \quad 2 \quad 3$$

$$2 \mid *|1 \ 2 \mid *|1 \ 2|** \mid$$

$$*|1 \ 2 \ 3|***$$



$$\square \quad |x-y| \leq 1$$

$$\begin{array}{c} v_1 \\ \square \end{array} \begin{array}{c} x \geq 0 \\ \square \end{array} \begin{array}{c} x \geq v_i \text{ (or same)} \\ \square \end{array}$$

$$\begin{array}{c} \# \quad 0 \quad 1 \quad 0 \\ \# \quad 1 \quad 0 \quad 0 \end{array}$$

$$\begin{array}{c} \# \quad \# \quad \# \quad \# \\ \# \quad \# \\ \# \quad \# \quad \# \end{array}$$

$$\begin{array}{c} \# \quad \# \\ \# \quad \# \end{array} \Rightarrow \begin{array}{c} 0 \ 1 \\ 1 \ 0 \end{array}$$

$$\begin{array}{c} 0 \ 0 \quad 0 \ 1 \\ 0 \ 0 \quad 0 \ 0 \end{array}$$

$$\begin{array}{l} - \text{all } 0 \quad 1 \\ - \text{one } 1 \quad 4 \\ - \text{two } 1(\text{any}) \quad 12 \end{array}$$

$$\begin{array}{c} 0 \ 1 \ X \\ 0 \ 2 \end{array} \quad \begin{array}{c} 0 \\ 0 \ 1 \\ 0 \ 1 \ 2 \\ 0 \ 1 \ 2 \ 3 \end{array}$$

$$\boxed{\{0(2 \ 3 \ 4)\}}$$

$$\begin{array}{c} \square \square \square \\ \square 0 \square \\ \square \square \square \end{array}$$

$$\text{graph, some cells adj to } 0 \text{ (forced to be } 0/1)$$

$$\# \# \# \quad 0 \ 1 \ 2$$

$$\# = 0/1$$

$$? = \geq 0$$