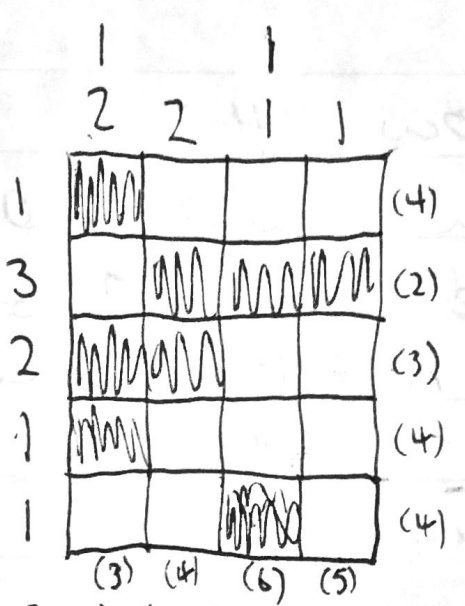
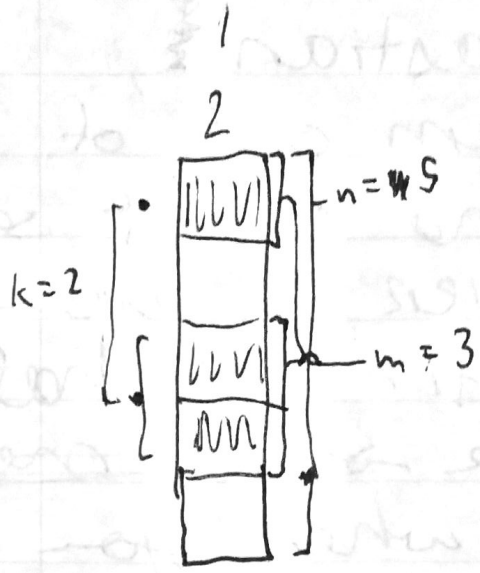


$(n-m)-(k-1)$

$P =$ ~~$(n-m-k+1)$~~ balls into $(k+1)$ bins

$$= \binom{n-m-k+1+k+N-N}{k}$$

$$= \binom{n-m+1}{k}$$



r balls into s bins →

$$\binom{r+s-1}{s-1}$$

			4	5		8	8	11	5 3	4		
1	8	3	3	11	2	3	2	1	3	8	1	n=14
1	8	7	8	11	10	11	13	9	7	8	1	m
14	7	8	7	4	5	4	2	6	8	7	14	n-m+1
1	1	2	2	1	2	2	2	3	2	1	1	k
14	7	28	21	4	10	6	1	20	28	7	14	P

4
6
8
8
10
12
16
14 1
14 1
4 4
4 4
4 4
2
3
3

14×12

$\prod_{i \in \text{cols}} P_i \approx 10^{12}$

$nCr(C_i) = 6$

$nCr(C_i \mid \{5\}) = ?$

- ☐ data structure
- ☐ generate Possibilities (Vector)
- ☐ ~~update~~ Possibilities (return) filter

while not solved {

~~find minimum possibility vector, $\vec{p}$~~

reset marks

for each vector, $\vec{p}$ {

for each possibility $\hat{p}$ {

for each

Algorithm:

generate possibilities for all vectors

while not done {

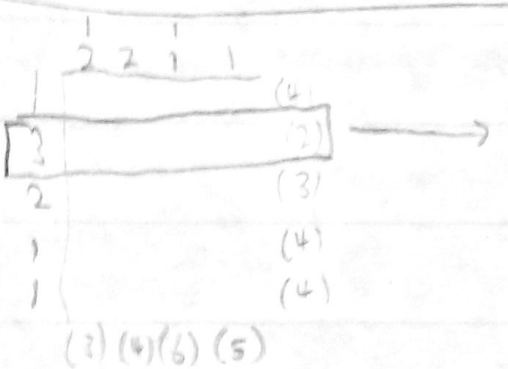
choose next

~~find lowest-entropy non-determined~~ vector

fix pixels with only 1 option

update possibilities for affected vectors

}



generatePossibilities(n, groups) => (7, [, ,])

numSpaces = (n-m) - (k-1)

→

$$\begin{bmatrix} 1 & 1 & 1 & 0 \\ 0 & 0 & \Delta & 1 \\ 1 & 1 & 0 & 0 \\ 1 & 1 & 1 & 1 \\ 0 & 0 & 1 & 1 \\ 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 1 \end{bmatrix}$$