

→↓↘

		B	D	C	A	B	A
	4 ↓	3 →	3 →	3 ↘	2 ↓	1 ↘	0
A	4 ↘	3 →	3 ↓	2 →	2 ↘	1 ↓	0
B	4 ↓	3 →	3 ↘	2 →	2 ↓	1 ↓	0
C	4 ↘	3 ↓	2 →	2 →	2 ↘	1 ↓	0
B	3 →	3 ↘	2 →	2 ↓	1 →	1 ↓	0
D	2 →	2 →	2 →	2 ↘	1 →	1 ↘	0
A	1 ↘	1 →	1 →	1 →	1 ↘	0 →	0
B	0	0	0	0	0	0	0

		B	D	C	A	B	A
	0	0←	0←	0←	0←	0←	0←
A	0↑	0↑←	0↑←	0↑←	1↖	1←	1↖
B	0↑	1↖	1←	1←	1↑←	2↖	2←
C	0↑	1↑	1↑←	2↖	2←	2↑←	2↑←
B	0↑	1↖	1↑←	2↑	2↑←	3↖	3←
D	0↑	1↑	2↖	2↑←	2↑←	3↑	3↑←
A	0↑	1↑	2↑	2↑←	3↖	3↑←	4↖
B	0↑	1↖	2↑	2↑←	3↑	4↖	4↑←

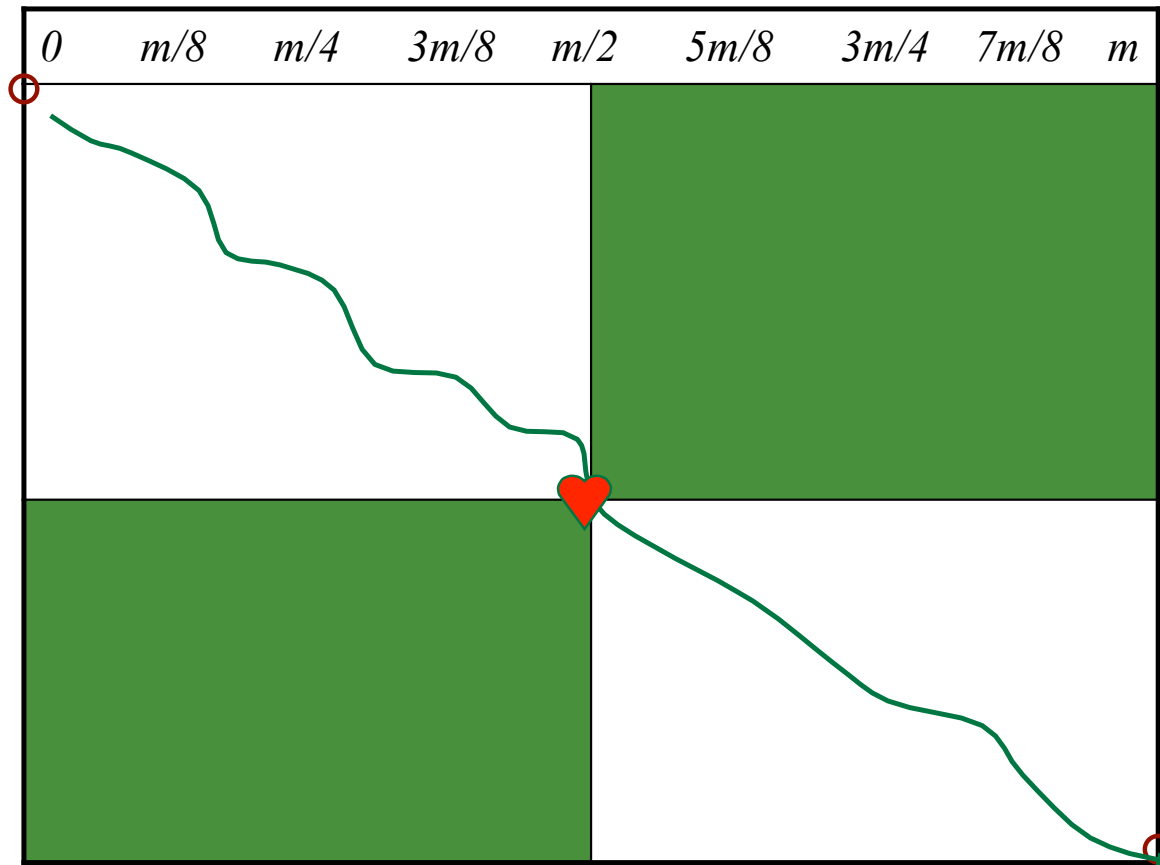
C

		B	D	C	A	B	A
	0	0←	0←	0←	0←	0←	0←
A	0↑	0↑ ←	0↑ ←	0↑ ←	1↖	1←	1↖
B	0↑	1↖	1←	1←	1↑ ←	2↖	2←
C	0↑	1↑	1↑ ←	2↖	2←	2↑ ←	2↑ ←
B	0↑	1↖	1↑ ←	2↑	2↑ ←	3↖	3←
D	0↑	1↑	2↖	2↑ ←	2↑ ←	3↑	3↑ ←
A	0↑	1↑	2↑	2↑ ←	3↖	3↑ ←	4↖
B	0↑	1↖	2↑	2↑ ←	3↑	4↖	4↑ ←

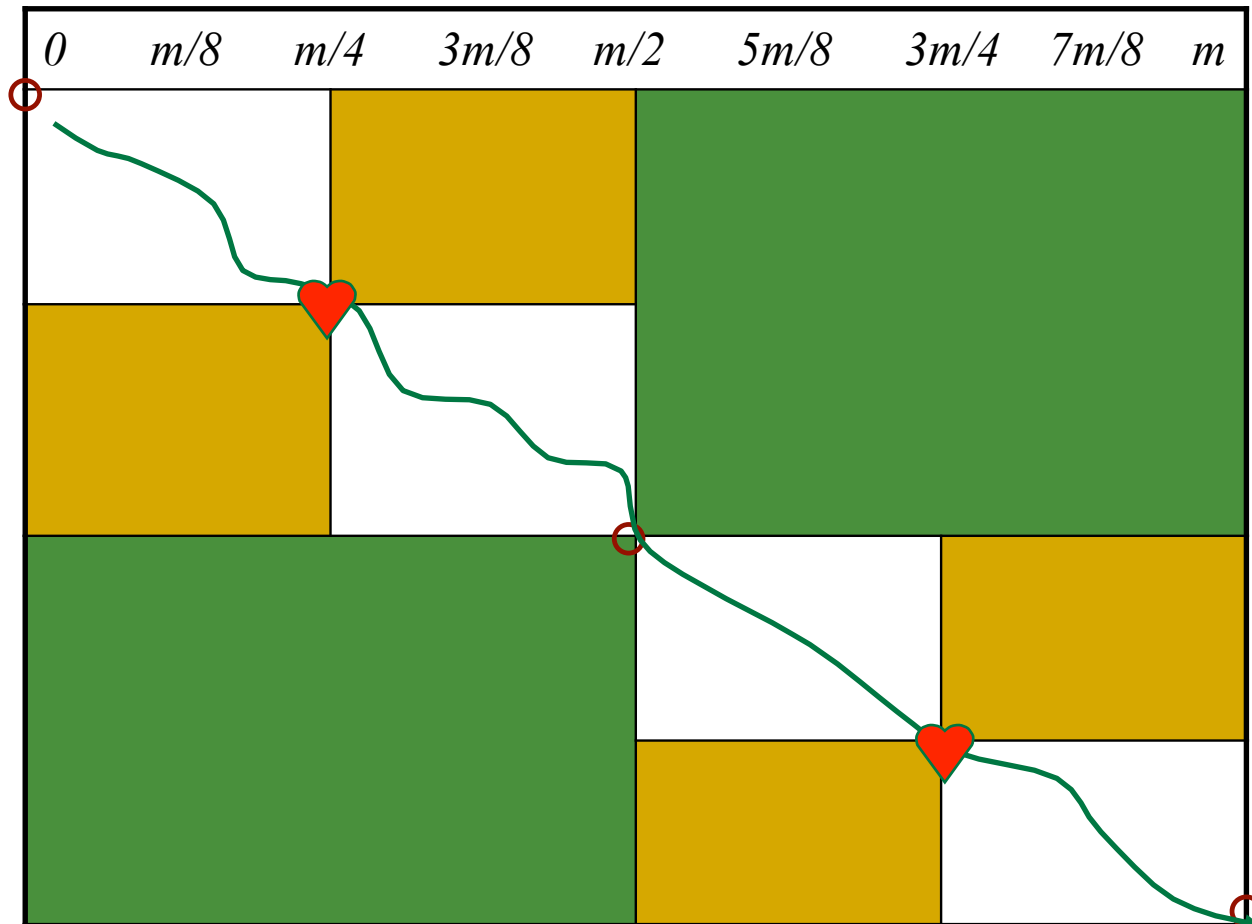
G

		B	D	C	A	B	A
	4 ↓	3 →	3 →	3 ↘	2 ↓	1 ↘	0
A	4 ↓	3 →	3 ↓	2 →	2 ↘	1 ↓	0
B	4 ↓	3 →	3 ↓	2 →	2 ↓	1 ↓	0
C	4 ↘	3 ↓	2 →	2 →	2 ↓	1 ↓	0
B	3 →	3 ↘	2 →	2 ↓	1 →	1 ↓	0
D	2 →	2 →	2 →	2 ↘	1 →	1 ↓	0
A	1 ↘	1 →	1 →	1 →	1 ↘	0 →	0
B	0	0	0	0	0	0	0

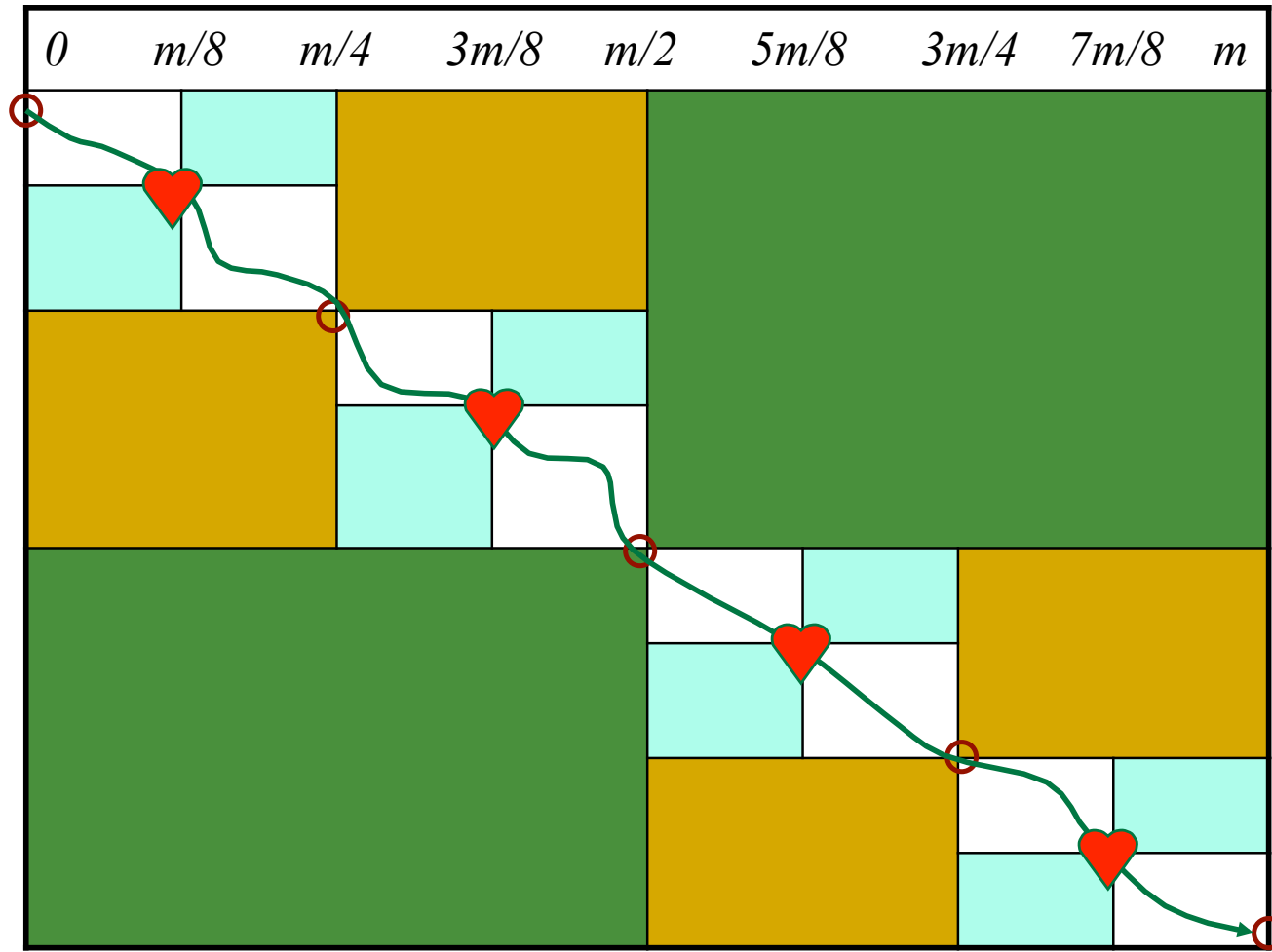
## Finding the Middle Point



## And Again



# And Again



## About the running time

- 1<sup>st</sup> pass: all the matrix is covered
- 2<sup>nd</sup> pass, half of the matrix
- 3<sup>rd</sup> pass:  $\frac{1}{4}$  th of the matrix

