

# Board representation 0x88

Friday, July 8, 2022

1:01 PM

7, 0	7, 1						7, 7
1, 0							
0, 0	0, 1						0, 7

(0, 0) = 0-000-0-000

(1, 0) = 0-001-0-000

(0, 1) = 0-000-0-001

(0, 7) = 0-000-0-111

(7, 0) = 0-111-0-000

(7, 7) = 0-111-0-111

Move a piece up one row:

- (1, 0) -> (0, 0)
  - 001-000 -> 000-000
- (6, 3) -> (5, 3)
  - 110-011 -> 101-011
- (0, 0) -> (-7, 0)
  - With six bits: 000-000 -> 001-000
  - With eight bits: 0-000-0-000 -> 1-001-0-000

x	0	1	2	3	4	5	6	7
7	112	113	114	115	116	117	118	119
6	106	107	108	109	100	101	102	103

0	80	81	82	83	84	85	86	87
5	64	65	66	67	68	69	70	71
4	48	49	50	51	52	53	54	55
3	32	33	34	35	36	37	38	39
2	16	17	18	19	20	21	22	23
1	0	1	2	3	4	5	6	7
0								

If number  $\geq 128$  then row is off board

If number  $\% 16$  is  $\geq 8$  then file is off board

Each team has:

- 8 pawns
- 2 rooks
- 2 knights
- 2 bishops
- 1 queen
- 1 king

$32 + 32^2$

0-7: white pawns

8-9: white rooks

10-11: white knights

12-13: white bishops

14: white queen

15: white king

+16 for black pieces

R-space

B

N

Q

K

'raa1'

'raa1'

rxal  
Bb5+  
Bb5#  
Axb5

If pawn on b4:

Bxc5 - pawn taking c5  
B6xc5 - bishop taking c5

Else:

Bxc5 - bishop taking c5 if there is no pawn that can take c5  
Bbxc5

Taking: 'x'

Check: '+'

Checkmate: '#'

'raxa7#'