

Making a Matrix!

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	I ₀	I ₄	I ₅	I ₇	I ₈	I ₁	I ₃	I ₆	I ₁₀	I ₁₁	I ₉	I ₂	
P ₀	0	4	5	7	8	1	3	6	10	11	9	2	R ₀
P ₈	8	0	1	3	4	9	11	2	6	7	5	10	R ₈
P ₇	7	11	0	2	3	8	10	1	5	6	4	9	R ₇
P ₅	5	9	10	0	1	6	8	11	3	4	2	7	R ₅
P ₄	4	8	9	11	0	5	7	10	2	3	1	6	R ₄
P ₁₁	11	3	4	6	7	0	2	5	9	10	8	1	R ₁₁
P ₉	9	1	2	4	5	10	0	3	7	8	6	11	R ₉
P ₆	6	10	11	1	2	7	9	0	4	5	3	8	R ₆
P ₂	2	6	7	9	10	3	5	8	0	1	11	4	R ₂
P ₁	1	5	6	8	9	2	4	7	11	0	10	3	R ₁
P ₃	3	7	8	10	11	4	6	9	1	2	0	5	R ₃
P ₁₀	10	2	3	5	6	11	1	4	8	9	7	0	R ₁₀
	RI ₀	RI ₄	RI ₅	RI ₇	RI ₈	RI ₁	RI ₃	RI ₆	RI ₁₀	RI ₁₁	RI ₉	RI ₂	

Version 1:

Step 1: Original Row transposed so the first number is 0 (in this case, add 5 or subtract 7)

Step 2: Find the inversion column by subtracting each number from 12.

Step 3: Fill in the rest...either add 1 each time (jumping around), or go down from the top and do the transpositions

Version 2: Use the original row in the top.

Step 1: Find the inversions...look at what is happening from number to number in the original row. Do the opposite for your column (if the original goes from 7 to 11 (up 4) then your column should go down 4 (that's what inverting is, mathematically)).

Step 2: Fill in the rest...either add 1 each time (jumping around), or go down from the top and do the transpositions

0	4	5	7	8	1	3	6	t	e	9	2	C = 0
8	0	1	3	4	9	E	2	6	7	5	T	C# = 1
7												D = 2
5												D# = 3
4												E = 4
E												F = 5
9												F# = 6
6												G = 7
2	6	7	9	T	3	5	8	0	1	E	4	G# = 8
1	5	6	8	9	2	4	7	E	0	T	3	A = 9
3												Bb = T
t												B = E

subtract from 12

(Version 1)



7 E 0 2 3 8 T 1 5 6 4 9

	" +4 "	" +1 "	" +2 "	" +1 "	" +5 "	" +2 "	" +3 "	" +4 "	" +1 "	" -2 "	" +5 "	
	7	E	0	2	3	8	T	1	5	6	4	9
" -4 "	3											
" -1 "	2											
" -2 "	0											
" -1 "	E											
" -5 "	6											
" -2 "	4											
" -3 "	1											
" -4 "	9											
" -1 "	8	0	1	3	4							
" +2 "	T											
" -5 "	5											

Version 2

	I ₇	I ₁₁	I ₀	I ₂	I ₃	I ₈	I ₁₀	I ₁	I ₅	I ₆	I ₄	I ₉	
P ₇	7	11	0	2	3	8	10	1	5	6	4	9	R ₇
P ₃	3	7	8	10	11	4	6	9	1	2	0	5	R ₃
P ₂	2	6	7	9	10	3	5	8	0	1	11	4	R ₂
P ₀	0	4	5	7	8	1	3	6	10	11	9	2	R ₀
P ₁₁	11	3	4	6	7	0	2	5	9	10	8	1	R ₁₁
P ₆	6	10	11	1	2	7	9	0	4	5	3	8	R ₆
P ₄	4	8	9	11	0	5	7	10	2	3	1	6	R ₄
P ₁	1	5	6	8	9	2	4	7	11	0	10	3	R ₁
P ₉	9	1	2	4	5	10	0	3	7	8	6	11	R ₉
P ₈	8	0	1	3	4	9	11	2	6	7	5	10	R ₈
P ₁₀	10	2	3	5	6	11	1	4	8	9	7	0	R ₁₀
P ₅	5	9	10	0	1	6	8	11	3	4	2	7	R ₅
	RI ₇	RI ₁₁	RI ₀	RI ₂	RI ₃	RI ₈	RI ₁₀	RI ₁	RI ₅	RI ₆	RI ₄	RI ₉	