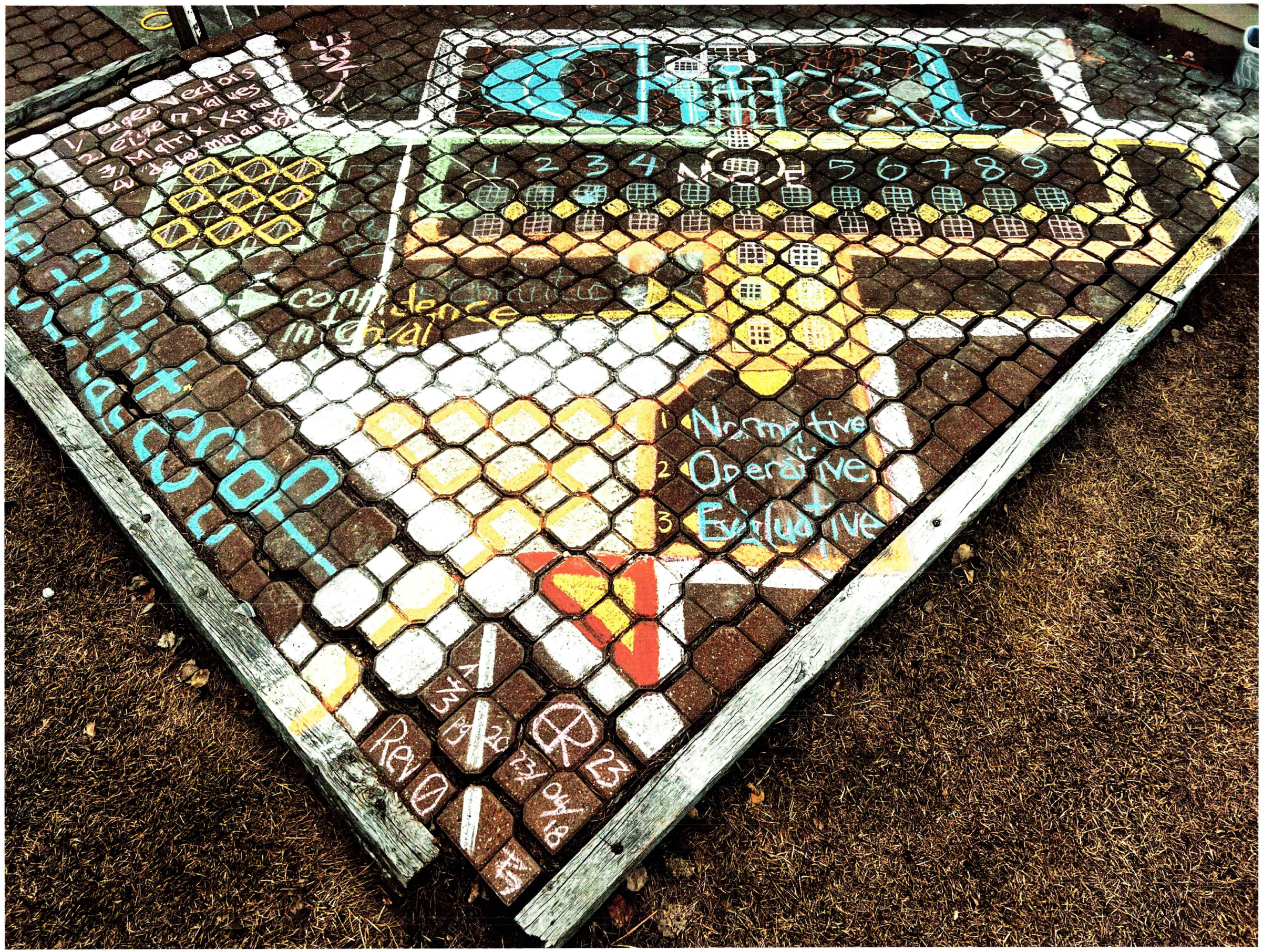
1 2 3 4 5 6 7 8 9
1 Normative
2 Operative
3 Evaluative
Rev 0

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Date: 2023.05.02

Author: R. Tufts, P. Eng.

Rev A.3.1

"Procedural Knowledge Generation by Semantic Matrix Operations in a Reinforcement Learning by Human Feedback Artificial Agency Framework: The Chirality Framework"

Identity 1	Operation 2.	Function 3	Hyper space. 4
1,1 $A \rightarrow A$	1,2 $(B)_t \rightarrow J$	1,3 $A : B = C$	1,4 $f[Y]_{\emptyset}^{2} \rightarrow$ datasheet
			object space
2,1 $B \rightarrow B$	2,2 $\{C\}^2 \rightarrow Y$	2,3 $A + (B)_t + \{C\}^2 = D$	2,4 $f[F]_{\emptyset}^{3} \rightarrow$ procedure
		$A + J + Y = F$	subject space
3,1 $(X_{4r4}, X_{256}) \in H$	3,2 $\{D\}^3 \rightarrow F$	3,3 $K \cdot J = X$	3,4 $f[I]_{\emptyset}^{3} \rightarrow$ how-to guide
			solution space.
4,1 $(X_{4r4}, X_{256}) \in \chi$	4,2 $[F]_T \rightarrow K$	4,3 $G \cdot T = E$	4,4 $f[W]_{\emptyset}^{4} \rightarrow$ lessons learnt
			evaluation space
5,1 $(X_{4r4}, X_{256}) \in V$	5,2 $\{x\}^3 \rightarrow Z$	5,3 $R \times Q = M$	5,4 $f[\chi]_{\emptyset}^{4} \rightarrow$ data science.
			RLHF space.
6,1 $V \in$ datalake.	6,2 $(Z)_t \rightarrow G$; X_{4r4} ($X^{(4)}_{\text{row 4}}$)	6,3 $S \times Q = U$	6,4 $f[I - L]_{\emptyset}^{m} \rightarrow$ solution iteration
			solution path space
7,1 $f[\chi]_0^4 \in V$	7,2 $[J]_T \rightarrow T$	7,3 $I - L = \mathcal{E}$	

Variables (matrices, vectors, agency)

	1 ID	2 Size	3 type	4 module	5 Purpose.
1	A	3×4			
2	B	4×4			
3	C	3×4			
4	D	3×4			
5	E	3×3			
6	F	3×4			
7	G	3×4			
8	H	N/A	human	mind	human knowledge
9	I	$(27\times3)^n$			
10	J	3×4			
11	K	4×3			
12	L	$(27\times3)^r$		agency	knowledge validation
13	M	27×3			
14	N				not assigned
15	Ω	$(27\times3)^s$	human	agency	responsible output
16	P				not assigned.
17	Q	3×3			
18	R	3×3			
19	S	3×1			
20	T	4×3			
21	U	9×3			
22	V				vectors f/ χ to datalake
23	W	9×3		agency	lessons learnt.
24	X	4×4			
25	X_{4r4}	1×4			
26	X_{256}	1×1			
27	Y	3×4			
28	Z	4×4			
29	γ	10-100 B.	LLM	Gii	governing AI parameters & instructions
30	$\mathcal{B}$	Knowledge graph	KG	Bii	knowledge base AI
31	$\mathcal{T}$	Hyper graph.	HG	Tii	task-oriented AI

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Identity	Operation.	Function.	Hyper space.
1	2	3	4

ID	Size	type	module	Purpose.
$\mathcal{E}$	$(27\times3)^{94}$			error function.
χ				problem solving & learning

8,1 $f[Y]_0^2 \in V$ 8,2 $L \rightarrow \Omega$

9,1 $f[F]_0^3 \in V$ 9,2 $\{E\}^3 \rightarrow Q$

10,1 $f[I]_0^3 \in V$ 10,2 $(F)_t \rightarrow R \;;\; 5$ (F, column 4.)

11,1 $f[W]_0^4 \in V$ 11,2 $\{M\}^3 \rightarrow I$

12,1 $(A, B, L, \Omega) \in H$ 12,2 $\{U\}^4 \rightarrow W$

13,1 $(( )_t, [\,]_T, \{\,\}^j, \in, f[\,]_0^i, \cdot, \times, *, +, -, \mathcal{E}) \in \chi$ 13,2 $(\gamma, \beta, \tau, \Omega) \rightarrow \chi$

14,1 $(L, I, \mathcal{E}, \Omega) \in V$ 14,2 $(X_{4r4})_t \rightarrow X_{256}$ ($X^{(4)}_{\text{row }4}$ element(4,4); $4\times4\times4\times4=256$)

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Identity	Operation	Function	Hyperspace.
1	2	3	4

ID	Size	type	module	Purpose.

15,1 $\gamma \in \chi$

16,1 $\beta \in \chi$

17,1 $\tau \in \chi$

18,1 $\Omega \rightarrow \Omega$

19,1 $L \in H$

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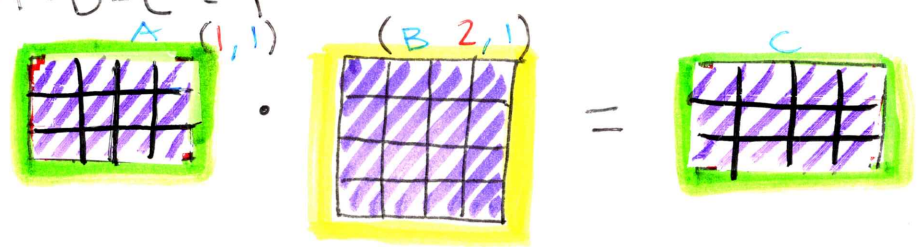
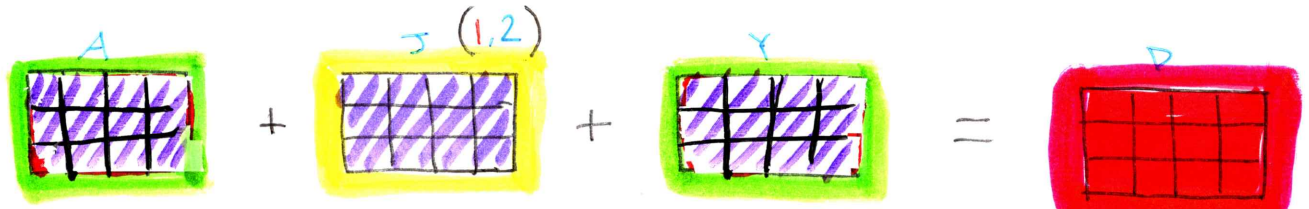
ID	Size	type	module	Purpose.

OPERATIONS | DECISIONS

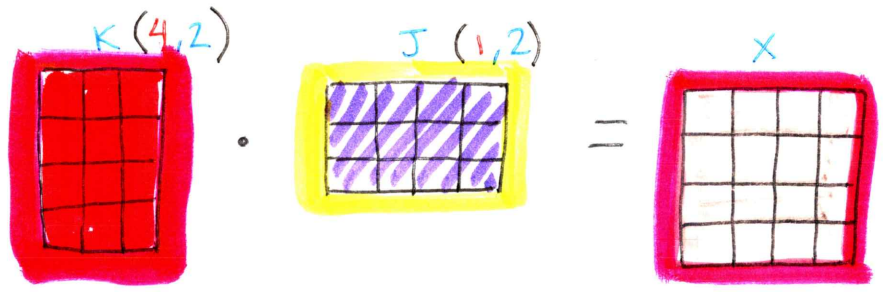
(1,3) $A \cdot B = C = Y$



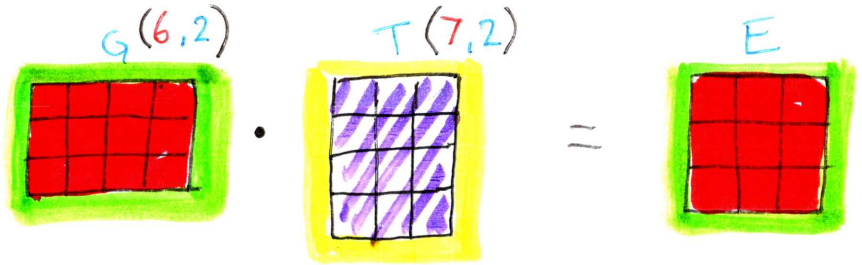
(2,3) $A + J + Y = D = F$



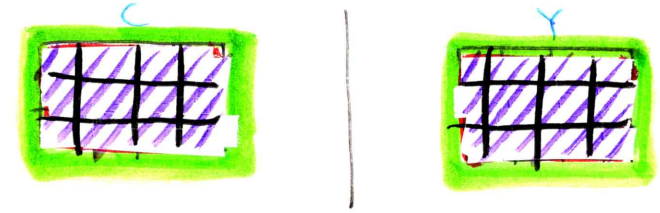
(3,3) $K \cdot J = X = Z$



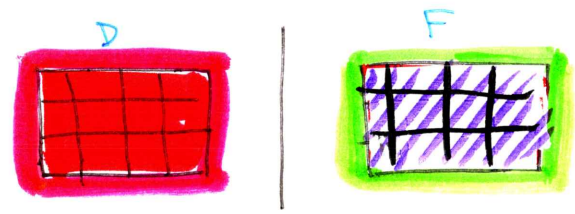
(4,3) $G \cdot T = E = Q$



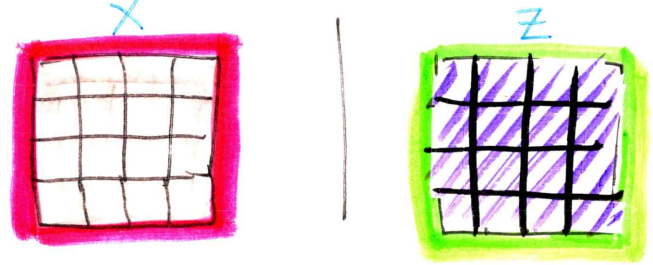
(2,2) $\{C\}^2 \rightarrow Y$



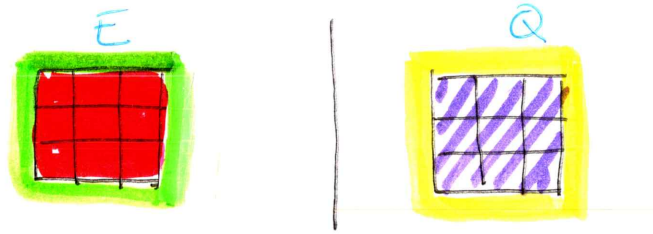
(3,2) $\{D\}^3 \rightarrow F$



(5,2) $\{X\}^3 \rightarrow Z$



(9,2) $\{E\}^3 \rightarrow Q$



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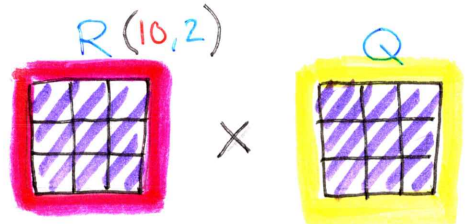
OPERATIONS

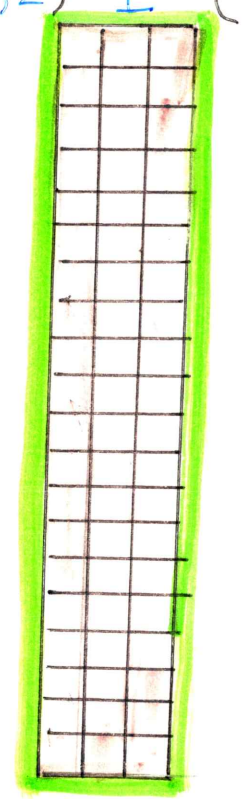
DECISIONS

ID	Size	type	module	Purpose.

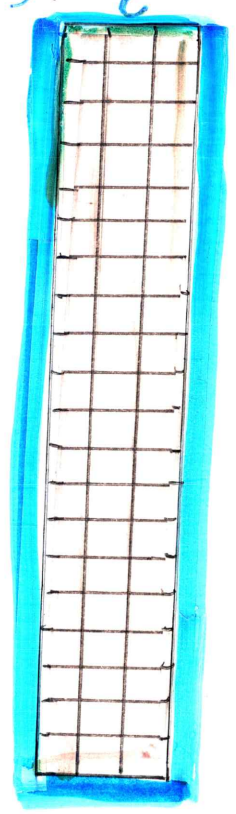
(5,3) R × Q = M = I



(11,2) I

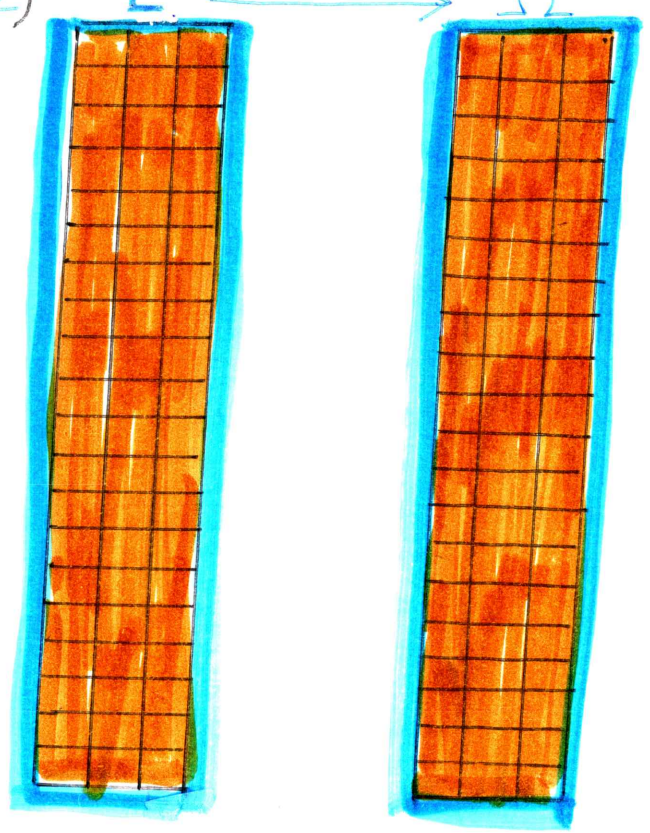


(7,3) Ɛ

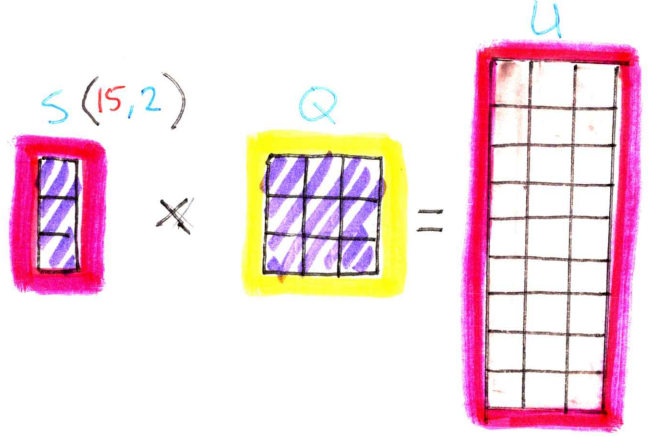


(7,3) I - L = Ɛ

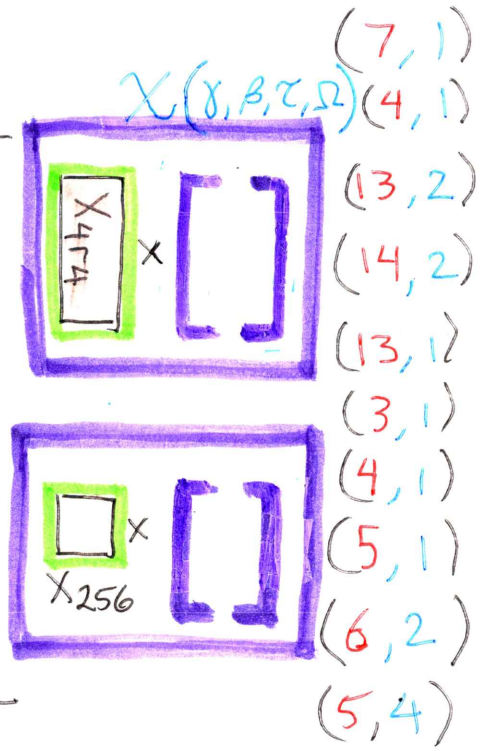
(8,2) L → Ω



(6,3) S × Q = U = W



(7,1)
(4,1)
(13,2)
(14,2)
(13,1)
(3,1)
(4,1)
(5,1)
(6,2)
(5,4)



(12,2) {u}⁴ → w