

	Educational program for mechanical systems engineering

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1	1
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()	
A	
B	
B-1	
B-2	

C

D

E

()

A

C

B

D

E

()

38 49 124 37

()

()

()

(D)

(E)

4

(1)

49

46

(2)

10

(3)

CAD

(4)

22

18

(5)

65

3

2

()

2003

3

4

TA

TA

2004

(1)

100

GP

(2)

GP

SGP

GP

GPA

(1) (A) (E)

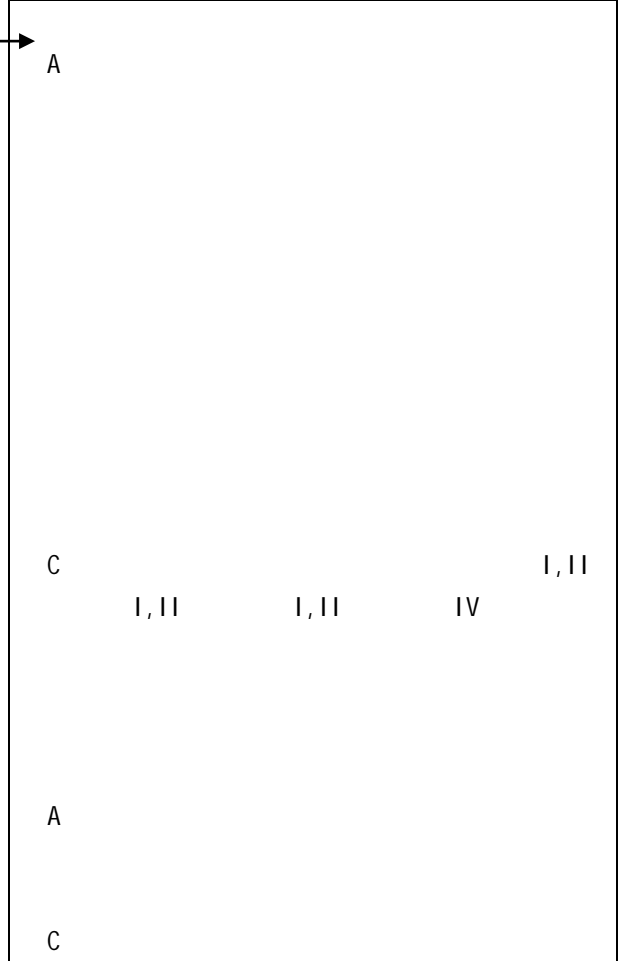
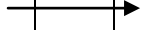
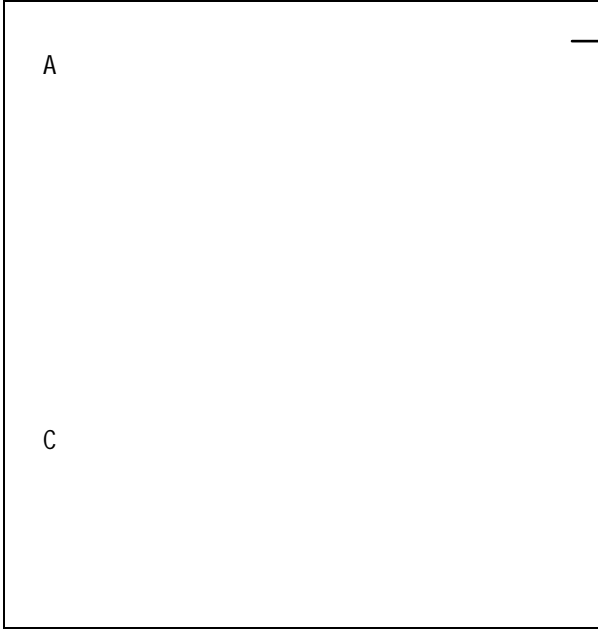
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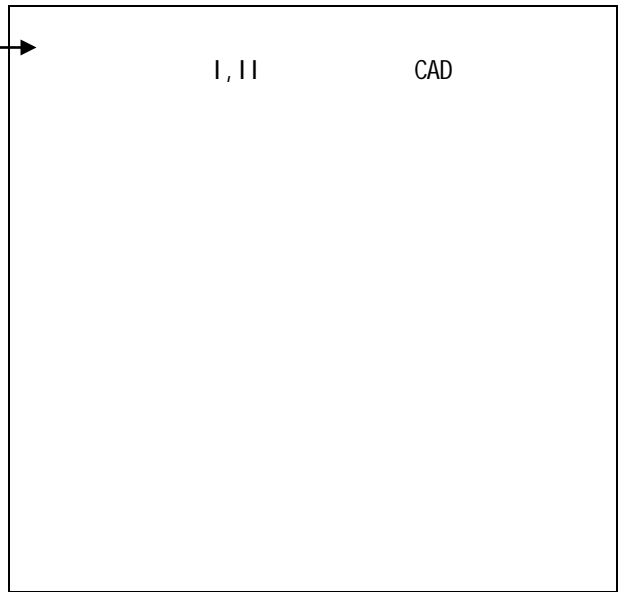
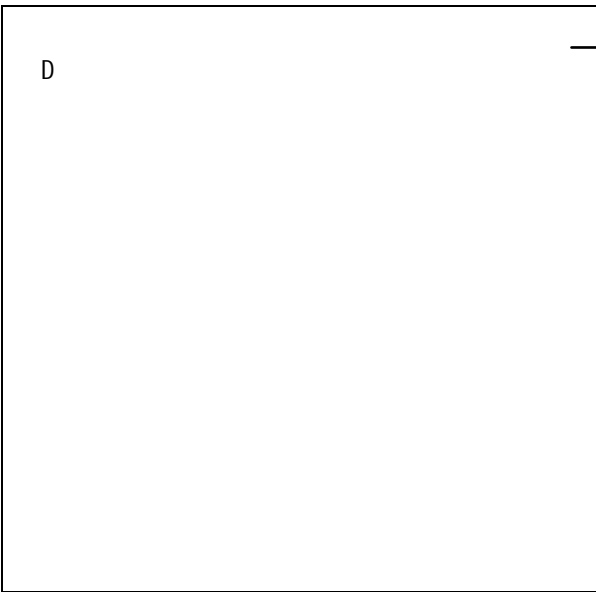
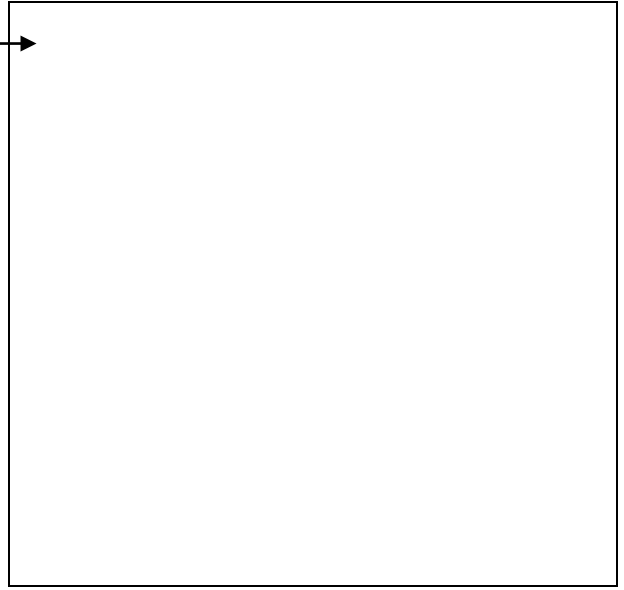
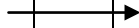
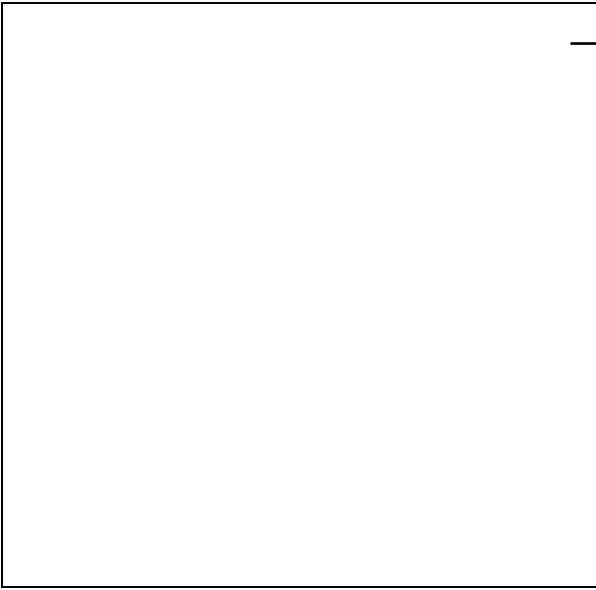
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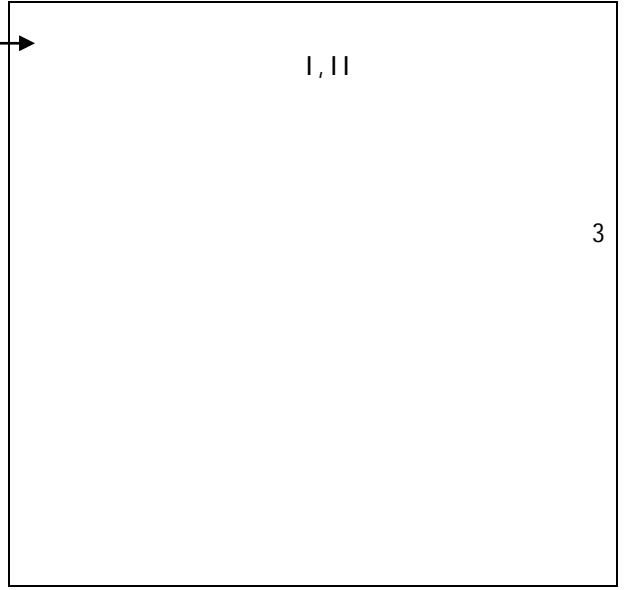
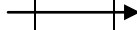
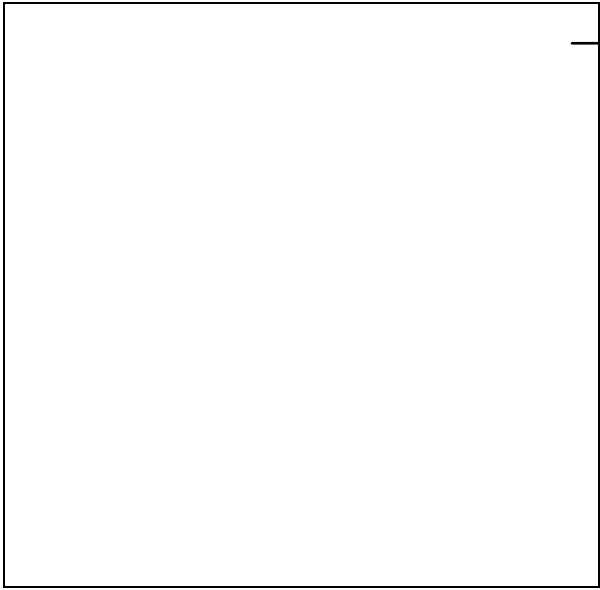
3

Threshold (Best) 2 3 Modal 1 2

(plan) (do) (check) (action)

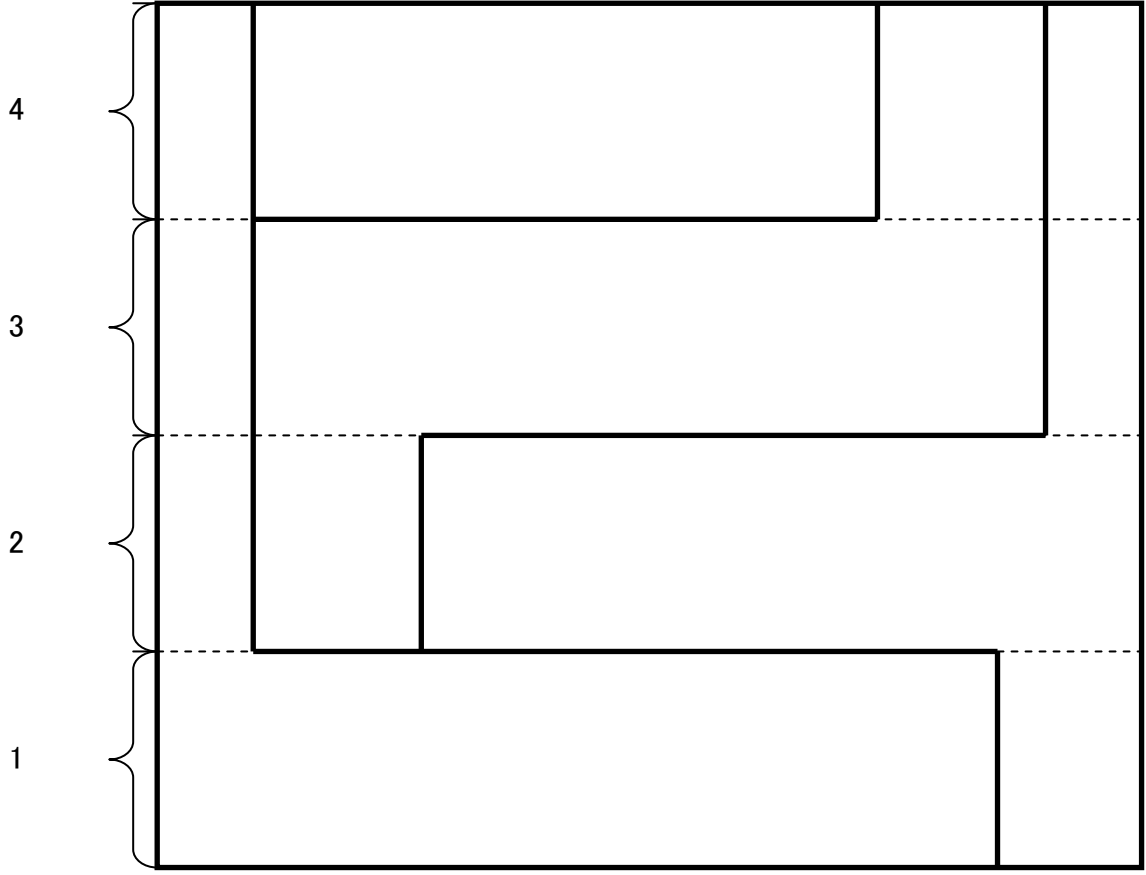


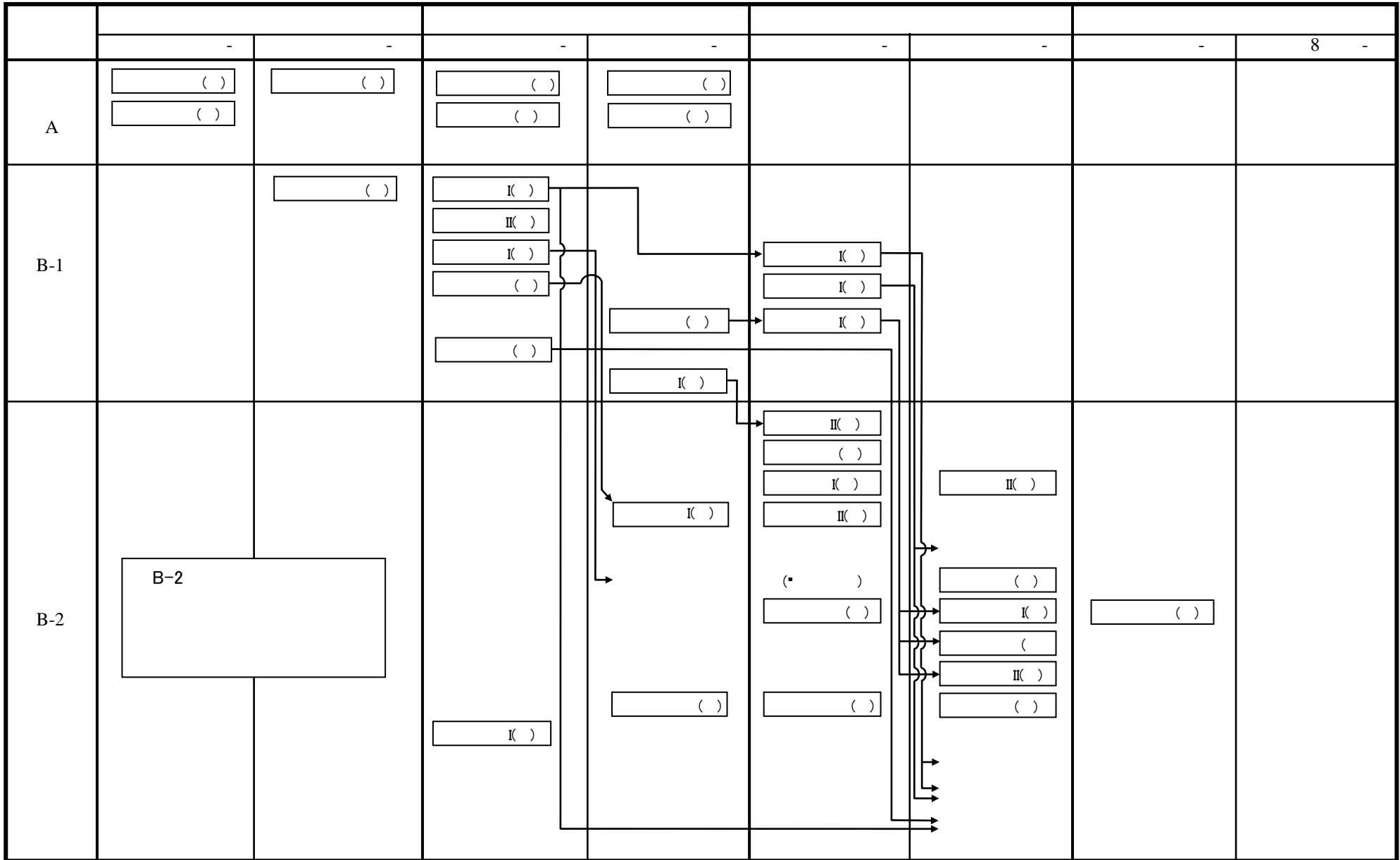




I, II

3





B-2	-	-	-	-	-	-	-	8
C	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">()</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">I()</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">I()</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">()</div> </div> <div style="display: flex; flex-direction: column; align-items: center; margin-left: 10px;"> <div style="margin-bottom: 2px;">→</div> <div style="margin-bottom: 2px;">→</div> <div style="margin-bottom: 2px;">→</div> <div style="margin-bottom: 2px;">→</div> <div style="margin-bottom: 2px;">└─┬─┘</div> <div style="margin-bottom: 2px;">└─┬─┘</div> </div> <div style="display: flex; flex-direction: column; align-items: center; margin-left: 10px;"> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">II()</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">II()</div> </div>		()					
D	()					→		()
E		→	→	→		→		()

															A	B	C	D	E				
		2		2														1.8	1.2				
()		4		1																1			
				1																	1		
				1																		1	
				1																		1	
	2		1																		1		
			1																			1	
			1																			1	
			1																			1	
			1																			1	
			1																				1
			()	1																	1		
	4			2																	1		
				2																		1	
																						1	
		2		2																	0.5		
	6	3			2																	1	
																							1
																							1
																							1
	21			3																		1	
				3																			1
				2																			1
				2																			1
				2																			1
				2																			1
				2																			1
				1																			1
				2																			1
				2																			1
	2																			1			
	2			1																	1		
	49																						

														A	B	C	D	E		
K02010		2						2												
K02020		2						2												
K02030		2							2											
K02050		2								2										
K02070		2							2											
K02080		2							2											
K02300		2									2									
K02100		2					2	2												
K02340		2						2												
K02130		2											2							
K02150		2											2							
K02290		2						2												
K02320		2							2											
K02730		1							2											
K02810		2						2												
K50100		1									3									
K50110		1										3								
K50120		2							2											
K50130		2								2										
K50140		2							2											
K50190		2								2										
K50220		2								2										
K50240		2							2											
K50260		2								2										
K50270		1						3												
K50330	CAD	1						3												
K50340		1									3									
K50300		2							2											
K50310	(a)	1						3												2
K50320	(b)	1						3												2

1
2 (a) (b) (a) (b)

								A	B	C	D	E	
	K51010	2					2			1			
	K51020	2					2			1			
	K51060	2					2			1			
	K51070	2								1			
	K51090	2								1			
	K51100	2					2			1			
	K51130	2								1			
	K52010	2					2			1			
	K52020	2								1			
	K52030	2					2			1			
	K52040	2								1			
	K52050	2					2			1			
	K52060	2								1			
	K52070	2					2			1			
	K52080	2								1			
	K52090	2				2				1			
	K52100	2								1			
	K51030	2					2			1			
	K51040	2								1			
	K51050	2								1			
	K51110	2				2				1			
	K51120	2				2				1			
	K53010	2								1			
	K53020	2								1			
	K53110	2					2			1			
	K53120	2								1			
	K53130	2								1			
	K53140	2								1			
	K51080	2					2			1			
	K53040	2				2				1			
	K53050	2								1			
	K53060	2				2				0.5		0.5	
	K53070	2					2		0.1	0.9			
	K53080	2								1			
	K53150	2				2				1			
	K54020	1						3		0.4		0.3	0.3
	K99980	5										1.6	1.4

											A	B	C	D	E					
	K51010		2				2													
	K51020		2				2													
	K51060		2				2													
	K51070		2								2									
	K51090		2								2									
	K51100		2				2													
	K51130		2								2									
	K52010		2				2													
	K52020		2							2										
	K52030		2				2													
	K52040		2							2										
	K52050		2				2													
	K52060		2							2										
	K52070		2				2													
	K52080		2							2										
	K52090		2			2														
	K52100		2								2									
	K51030		2				2													
	K51040		2							2										
	K51050		2							2										
	K51110		2			2														
	K51120		2			2														
	K53010		2							2										
	K53020		2							2										
	K53110		2				2													
	K53120		2							2										
	K53130		2							2										
	K53140		2								2									
	K51080		2				2													
	K53040		2			2														
	K53050		2							2										
	K53060		2			2										0.5			0.5	
	K53070		2				2								0.1	0.9				
	K53080		2								2					1				
	K53150		2			2										1				
	K54020		1							3						0.4			0.3	0.3
	K99980		5															1.6	1.4	

K51010

A B C D E

A				
C				

B				

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D				

E				

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φ_i

$$\frac{\sum_i \varphi_i T_i P_i}{\sum_{i \neq j} \varphi_i T_i} \quad (P_j = 0)$$

i *P_i*

P_i *P_i* *P_i* *P_i*

P_i

$$\frac{\sum_i T_i P_i}{\sum_{i \neq j} T_i} \quad (P_j = 0)$$

	$(2 , , 2)$ $(3 , , 2)$ $(3 , , 2)$	
	$(2 , , 2)$ $(3 , , 2)$ $(1 , , 2)$ ishizuka@hiroshima-u.ac.jp	
	$(, I , 2)$ $(2 , , 2)$ $(2 , , 2)$ $(3 , , 1)$ takumaendo@hiroshima-u.ac.jp	
	$(2 , , 2)$ $(3 , , 2)$	
	$(3 , , 2)$ $(3 , , 2)$ saeki @hiroshima-u.ac.jp	
	$(3 , , 2)$ gen@hiroshima-u.ac.jp	
	I($2 , III , 2$) $(2 , , 2)$ CAD($1 , 1$)() $(1 , , 1)$ () sawa@mec.hiroshima-u.ac.jp	

	shizuma@hiroshima-u.ac.jp	
	kshino@hiroshima-u.ac.jp	
	$\begin{matrix} 3 & 2 \\ 4 & 2 \end{matrix}$	
	$\begin{matrix} (& 2 & , & & , & 2 &) \\ (& 3 & , & & , & 2 &) \\ (& 1 & & & 2 &) & (& &) \end{matrix}$	
	takiyam@hiroshima-u.ac.jp	
	$\begin{matrix} (& 1 & , & & , & 2 &) \\ (& 2 & , & & , & 2 &) \\ (& 2 & , & & , & 2 &) \\ (& 3 & , & & , & 1 &) & (& &) \\ (a)/(b)(& 2 & , & & , & 1 &) & (& &) \end{matrix}$	
	nagamura@mec.hiroshima-u.ac.jp	
	$\begin{matrix} (& 1 & , & & , & 2 &) \\ (& 2 & , & & , & 2 &) \\ (& 4 & , & & , & 2 &) \end{matrix}$	
	matsugi@hiroshima-u.ac.jp	
	$\begin{matrix} (& 3 & , & & , & 2 &) \\ (& 3 & , & & , & 2 &) \\ (& 2 & , & & , & 1 &) & (& &) \end{matrix}$	
	mat@hiroshima-u.ac.jp	
	yama@mec.hiroshima-u.ac.jp	
	$\begin{matrix} (& 3 & , & & , & 2 &) \\ (& 4 & , & & , & 2 &) \end{matrix}$	
	yoshida@hiroshima-u.ac.jp	
	$\begin{matrix} (& 3 & , & & , & 2 &) \\ (& 3 & , & & , & 1 &) \\ (& & , & I & , & 2 &) \end{matrix}$	
	shu18@hiroshima-u.ac.jp	
	$\begin{matrix} I & 2 & 2 \\ (& 2 & , & & , & 2 &) \\ (& 3 & , & & , & 1 &) \end{matrix}$	

	iwamoto@mec.hiroshima-u.ac.jp	
	(1 , , 1) () (3 , , 2) (3 , , 2)	
	eguchi@hiroshima-u.ac.jp (3 , , 2) (, I , 2)	
	@hiroshima-u.ac.jp (2 , III , 2) (3 , , 2) (3 , , 2) (3 , , 1)	
	(1 , , 2) (2 , , 2) (3 , , 2)	
	kato@mec.hiroshima-u.ac.jp CAD (2 , , 1) (3 , , 2)	
	seki@mec.hiroshima-u.ac.jp (3 , , 1) 4 2 (3 , , 1)	
	namba@hiroshima-u.ac.jp (1 , , 2) (2 , III , 2) (3 , , 2)	
	nishida@mec.hiroshima-u.ac.jp (3 , , 2) (3 , , 2)	
	nishino@hiroshima-u.ac.jp (, I , 2) (3 , , 2) (3 , , 2)	
	hino@mec.hiroshima-u.ac.jp (, I , 2)	

	(4 , , 2) hirofk@hiroshima-u.ac.jp	
	(4 , , 2) (3 , , 1) msb@mec.hiroshima-u.ac.jp	
	CAD (1 , , 1) (3 , , 2) (3 , , 1) keiji@hiroshima-u.ac.jp	
	(3 , , 2) (2 , , 1)	
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	(3 , , 1) (1 , , 1) kadoi@mec.hiroshima-u.ac.jp	
	(3 , , 1) ykojima@hiroshima-u.ac.jp	
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	(2 , , 2)	
	(3 , , 1) (3 , , 1) suzuki@mec.hiroshima-u.ac.jp	
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	CAD (1 , 1) (3 , , 1) yasu@hiroshima-u.ac.jp	
	takuyayo@hiroshima-u.ac.jp	

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