## Zadání 1. úkolu do předmětu IZU

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Pomocí metody UCS určete **nejkratší** dobu, za kterou čtyři lidé přejdou most. Máme most, přes který mohou jít jen dva lidé zaráz a přitom musí nést pochodeň. Každý jde jinou rychlostí, pokud jsou dva lidé spolu, jdou rychlostí pomalejšího. Doba přechodu mostu pro jednotlivé osoby viz tabulka, rychlosti u operátorů doplňte. Operátory používejte podle jejich pořadí. V jednotlivých krocích uvádějte obsahy zásobníků Open a Closed. Jako cestu vypište pořadí použitých operátorů.

Pochodeň je označena "\*", číslo udává dobu cesty, osoby (A, B, C, D) nalevo od čísla jsou na jedné straně mostu, osoby napravo od čísla jsou na druhé straně mostu. "X" značí dobu, za kterou se všichni lidé dostanou na druhou stranu.

Start: [\*ABCD0]

Cíl: [18ABCD\*]

Časy:

A:1

B:3

C:6

D:8

## Operátory:

1. A <- 1

5. AB -> 3

9. BD -> 8

2. B <- 3

6.

AC -> 6

10.

CD -> 8

3. C <- 6

7.

AD -> 8

4. D <- 8

8. BC -> 6

Cesta:	5.	1.	10.	2.	5.		
Suma:18	3	1	8	3	3		

README: Vsechny uzly v Open, které mají hodnotu větší než doteď nejmenši nalezený finální uzel, jsou vyškrtnuty. (Optimalizace)

Legenda: Právě expandovaný uzel | Jeho následníci | Finální uzel

<b>.</b>	[* 4 D C D O ]							
Open:	[*ABCD0]							
Closed:								
0	[CD2AD*]	[DDCAC*]	[DC0AD*1	[ADCDC*1	[4 CODD*	1 [40000*	,	
Open:	[CD3AB*]	[BD6AC*]	[BC8AD*]	[AD6BC*]	[AC8BD*	] [AB8CD*	]	
	T		1	<u> </u>	<u> </u>	<del>                                     </del>		
Closed:	[*ABCD0]							
					5 ta	] e		1
Open:	[BD6AC*]	[BC8AD*]	[AD6BC*]	[AC8BD*]	[AB8CD*]	[*ACD4B]	[*BCD6A]	
Open:	[BD6AC*]	[BC8AD*]	[AD6BC*]	[AC8BD*]	[AB8CD*]	[*ACD4B	[*BCD6A]	
Open:	[BD6AC*]	[BC8AD*]	[AD6BC*]	[AC8BD*]	[AB8CD*]	[*ACD4B	[*BCD6A]	
			[AD6BC*]	[AC8BD*]	[AB8CD*]	[*ACD4B	[*BCD6A]	
Open:	[BD6AC*]		[AD6BC*]	[AC8BD*]	[AB8CD*]	[*ACD4B	[*BCD6A]	
			[AD6BC*]	[AC8BD*]	[AB8CD*]	[*ACD4B]	[*BCD6A]	
			[AD6BC*]	[AC8BD*]	[AB8CD*]	[*ACD4B	[*BCD6A]	
			[AD6BC*]	[AC8BD*]	[AB8CD*]	[*ACD4B]	[*BCD6A]	
			[AD6BC*]	[AC8BD*]	[AB8CD*]	[*ACD4B	[*BCD6A]	
Closed:	[*ABCD0]	[CD3AB*]						
	[*ABCD0]			[AC8BD*]	[AB8CD*]			*] [C12ABD
Closed:	[*ABCD0]	[CD3AB*]						[C12ABD
Closed:	[*ABCD0]	[CD3AB*]						*] [C12ABD
Closed:	[*ABCD0]  [BD6AC*] [A12BCD*]	[CD3AB*]	[AD6BC*]					[C12ABD
Closed:	[*ABCD0]	[CD3AB*]	[AD6BC*]					*] [C12ABD
Closed:	[*ABCD0]  [BD6AC*] [A12BCD*]	[CD3AB*]	[AD6BC*]					[C12ABD

en: [BC8AD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14AC [D10ABC*] [B15ACD*] [A15BCD*]	Open:	[BC8AD*]	] [AD6BC*]	[AC8BD*]	[AB8CD*]	[*BCD6A]	[D10ABC*]	[C12ABD*]	[A12BCD*]
Open: [BC8AD*] [AC8BD*] [AB8CD*] [*BCD6A] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD7C]  [*ABD9C] [*ACD12B]  Closed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*]  [D12ABC*] [C12ABD*] [AC8BD*] [B14ACD*]  Osed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [C12ABD*] [A12BCD*] [*ABD7C] [*ABD9C]  [*ABD9C] [*ABD9C] [C14ABD*] [B14ACD*]  Osed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*] [*BCD6A]  [*BC8AD*] [AC8BD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14ACD*]  [*BC8AD*] [B15ACD*] [A15BCD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14ACD*]		[*ABD7C	] [*BCD12A]	-					
Open: [BC8AD*] [AC8BD*] [AB8CD*] [*BCD6A] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD7C]  [*ABD9C] [*ACD12B]  Closed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*]  [D12ABC*] [C12ABD*] [AC8BD*] [B14ACD*]  Osed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [C12ABD*] [A12BCD*] [*ABD7C] [*ABD9C]  [*ABD9C] [*ABD9C] [C14ABD*] [B14ACD*]  Osed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*] [*BCD6A]  [*BC8AD*] [AC8BD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14ACD*]  [*BC8AD*] [B15ACD*] [A15BCD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14ACD*]									
Open: [BC8AD*] [AC8BD*] [AB8CD*] [*BCD6A] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD7C]  [*ABD9C] [*ACD12B]  Closed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*]  [D12ABC*] [C12ABD*] [AC8BD*] [B14ACD*]  Osed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [C12ABD*] [A12BCD*] [*ABD7C] [*ABD9C]  [*ABD9C] [*ABD9C] [C14ABD*] [B14ACD*]  Osed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*] [*BCD6A]  [*BC8AD*] [AC8BD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14ACD*]  [*BC8AD*] [B15ACD*] [A15BCD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14ACD*]									
[*ABD9C] [*ACD12B] [*ACD12B] [*BD6AC*] [AD6BC*] [AD6BC*] [*ABCD0] [*ABD7C]	Closed:	[*ABCD0	[CD3AB*]	[*ACD4B]	[BD6AC*]				
[*ABD9C] [*ACD12B] [*ACD12B] [*BD6AC*] [AD6BC*] [AD6BC*] [*ABCD0] [*ABD7C]									
[*ABD9C] [*ACD12B] [*ACD12B] [*BD6AC*] [AD6BC*] [AD6BC*] [*ABCD0] [*ABD7C]									
[*ABD9C] [*ACD12B] [*ACD12B] [*BD6AC*] [AD6BC*] [AD6BC*] [*ABCD0] [*ABD7C]									
[*ABD9C] [*ACD12B] [*ACD12B] [*BD6AC*] [AD6BC*] [AD6BC*] [*ABCD0] [*ABD7C]									
[*ABD9C] [*ACD12B] [*ACD12B] [*BD6AC*] [AD6BC*] [AD6BC*] [*ABCD0] [*ABD7C]	Onen:	[BC8VD*]	[AC8BD*]	[AB8CD*]	[*BCD6A]	[D10ABC*]	[C12ARD*]	[A12BCD*]	[*ARD7C]
Closed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*]  pen: [BC8AD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD7C] [*ABD9C [D12ABC*] [C14ABD*] [B14ACD*]  osed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*] [*BCD6A]  en: [BC8AD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14AC [D10ABC*] [B15ACD*] [A15BCD*]	орен.				[ BCDOA]	[DIOABC ]	[CIZADD ]	[AIZBCD ]	[ ADD/C]
pen: [BC8AD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C [D12ABC*] [C14ABD*] [B14ACD*]  osed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*] [*BCD6A]  en: [BC8AD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14AC [D10ABC*] [B15ACD*] [A15BCD*]		[ 7,5550]	[ //CD12b]						
pen: [BC8AD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C [D12ABC*] [C14ABD*] [B14ACD*]  osed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*] [*BCD6A]  en: [BC8AD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14AC [D10ABC*] [B15ACD*] [A15BCD*]		1	I	1	l	ı	l	I	l
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[D12ABC*]   [C14ABD*]   [B14ACD*]		[	, [(====================================	[	į – i i i	t in one of			
[D12ABC*]   [C14ABD*]   [B14ACD*]									
[D12ABC*]   [C14ABD*]   [B14ACD*]									
[D12ABC*]   [C14ABD*]   [B14ACD*]		[DC0 4 D*]	[4.0000*]	[40000*]	[D40ABC	*1 [C4 2 4 D D	k1 [442BCD)	k1 [* A D D 7 C]	[****
osed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*] [*BCD6A]  en: [BC8AD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14AC [D10ABC*] [B15ACD*] [A15BCD*]	pen:				[D10ABC	"] [C12ABD"	rj [A12BCD	r] [*ABD/C]	[*ABD9C]
en: [BC8AD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14AC [D10ABC*] [B15ACD*] [A15BCD*]		<del>[D12/\BC*]</del>	<del>[CI4/\BD*]</del>	[B14ACD*]					
en: [BC8AD*] [AC8BD*] [AB8CD*] [D10ABC*] [C12ABD*] [A12BCD*] [*ABD9C] [B14AC [D10ABC*] [B15ACD*] [A15BCD*]									
[D10ABC*] [B15ACD*] [A15BCD*]	osed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]		
[D10ABC*] [B15ACD*] [A15BCD*]									
[D10ABC*] [B15ACD*] [A15BCD*]									
[D10ABC*] [B15ACD*] [A15BCD*]									
[D10ABC*] [B15ACD*] [A15BCD*]									
[D10ABC*] [B15ACD*] [A15BCD*]	on: 1	[DC0VD*]	[VC0DD*]	[VD0CD*]	[D104PC*]	[C12ADD3	() [A12DCD	*] [*ADDOC	[D14ACD*
					[DIOADC.]	[CIZADD	] [ATZDCD	] [ ADD3C]	[D14ACD
sed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*] [*BCD6A] [*ABD7C]	1	DIONDE J	[DIDACD ]	[ <del>AIJUCD ]</del>					
sed: [*ABCD0] [CD3AB*] [*ACD4B] [BD6AC*] [AD6BC*] [*BCD6A] [*ABD7C]			<u>L</u>		I	l			
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	sed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	
	sed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	
	osed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	

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Open:	[AC8BD*]	[AB8CD*]	[D10ABC*]	[C12ABD*]	[A12BCD*]	[*ABD9C]	[B14ACD*]	[*ABC9D]
	[*BCD16A]							
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
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	- 1		•	- 1				
Open:	[AB8CD*]	[D10ABC*]	[C12ABD*]	[A12BCD*]	[*ABD9C]	[B14ACD*]	[*ABC9D]	[*ABC11D]
•	[*ACD16B]	<u>'</u>		<u> </u>			<u> </u>	1
	<u>l</u>		l	<u> </u>		<u>l</u>	L	
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
Ciosca.	[AC8BD*]	[000/10]	[ /(5545]	[DDO/(C ]	[/10000]	[ DCDO/N]	[ ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	[DCG/(D ]
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Open:	[D10ABC*]	[C12ABD*]	[*ABD9C]	[A12BCD*]	[B14ACD*]	[*ABC9D]	[*ABC14D]	[*ABD16C]
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	•			•		•		
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
	[AC8BD*]	[AB8CD*]	[	[220.10]	[, .2 0 2 0 ]	[ 233,1]	[	[200.10]
	[]	2						
	1	1		1	1		1	1
Open:	[D10ABC*]	[C12ABD*]	[A12BCD*]	[B14ACD*]	[*ABC9D]	<del>[D12ABC*]</del>	[B17ACD*]	[A17BCD*]
орси.	[DIONDC]	[CIZ/(DD ]	[,(1250)]	[511105]	[ 7.0030]	[DIZINGC]	[DITTION ]	[/(1/300)]
OL '	[** 0.00.03	[000:5#]	[*4.05.15]	[006:64]	[40.000*]	[*0053:3	[**05=0]	[00012#3
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
	[*CODD*]	1 1 V D O C D * 1			I	1	I	1
	[AC8BD*]	[AB8CD*]	[*ABD9C]					

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Open:	[D10ABC*]	[C12ABD*]	[A12BCD*]	[B14ACD*]	[C12ABD*]	[B15ACD*]	-[A15BCD*]	
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]				
	•					•	•	
Open:	[C12ABD*]	[A12BCD*]	[B14ACD*]	[*AD11BC]	[*BD13AC]	[*CD16AB]		
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
Ciosca.	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[ BCDOA]	[ ADD / C]	[DCOVD ]
	[ACODD ]	[ADOCD ]	[ ABD3C]	[ ABC3D]	[DIOVDC ]			
Open:	[C12ABD*]	[A12BCD*]	[B14ACD*]	[*BD13AC]	[*CD16AB]	[19ABCD*]	<u> </u>	
Орен	[0225]	[, ,	[525]	[ 55-2:,	[ 02-21,	[257.252]		
Closed:	[* ^ D C D O ]	[CD3VD*]	[*^CD4D]	[DDCVC*]	[AD6BC*]	[*DCD6V]	[*ABD7C]	[BC8AD*]
Ciosea.	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	+	[*BCD6A] [*AD11BC]	[·ABD/C]	[BC9AD ]
	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[_ADITPC]		
	1:::22.65*1	[	[#554346]	[# CD 4 C 4 D]	5#+ C10001	5450454B1	[#070047]	<del></del>
Open:	[A12BCD*]	[B14ACD*]	[*BD13AC]	[*CD16AB]	[*AC13BD]	[*BC15AD]	[*CD20AB]	
	[19ABCD*]							
			•					
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
<u> </u>	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]	[C12ABD*]	

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Open:	[B14ACD*]	[*BD13AC]	[*CD16AB]	[*AC13BD]	[*BC15AD]	[*AB15CD]	[*AC18BD]	[*AD20CD]
	[19ABCD*]							
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]	[C12ABD*]	[A12BCD*]
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Open:	[B14ACD*]	[*CD16AB]	[*AC13BD]	[*BC15AD]	[*AB15CD]	[*AC18BD]	[21ABCD*]	
	[19ABCD*]							
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]	[C12ABD*]	[A12BCD*]
	[*BD13AC]							
Open:	[B14ACD*]	[*CD16AB]	[*BC15AD]	[*AB15CD]	[*AC18BD]	[19ABCD*]		
	[19ABCD*]							
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Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
ciosca.	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]	[C12ABD*]	[A12BCD*]
	[*BD13AC]	[*AC13BD]	[ 7.2550]	[	[520, 150]	[ /.51150]	[012, (00)]	[, (12369 ]
	[ 5513/(0]	[ //СТЭВВ]	<u> </u>	<u> </u>	1		<u> </u>	
Open:	[*CD16AB]	[*BC15AD]	[*AB15CD]	[*AC18BD]	[*AB15CD]	[*BC20AD]	[*BD22AC]	
орсіі.	[ CDIOND]	[ DCI3AD]	[ 1,013(0)	[ //CIODD]	[ NDIDED]	[ BCZOAD]	[ DDZZACJ	+
	[19ABCD*]							+
	[15/\DCD ]						<u> </u>	
Class I	[***DCDC]	[CD245*]	[**************************************	[DDC46*]	[40000*]	[*00004]	[***0020]	[20000]
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
	IVCODD#1	1 1 V D O C D * 1	* V D D O C	1 1 * A D C O D 1	1 1D101DC*1	1 1 * A D 1 1 D C ]	1 1C13 A D D *1	- 1443DCDXI
	[AC8BD*] [*BD13AC]	[AB8CD*] [*AC13BD]	[*ABD9C] [B14ACD*]	[*ABC9D]	[D10ABC*]	[*AD11BC]	[C12ABD*]	[A12BCD*]

Open:	[*CD16AB]	[*AB15CD]	[*AC18BD]	[21ABCD*]				
	[19ABCD*]							
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]	[C12ABD*]	[A12BCD*]
	[*BD13AC]	[*AC13BD]	[B14ACD*]	[*BC15AD]				
Ononi	[*CD16AD]	[* \ C10DD]	[1040CD*]					
Open:	[*CD16AB]	[*AC18BD]	[18ABCD*]					
	[19ABCD*]							
	[257,000]				I			
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
0.0000.	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]	[C12ABD*]	[A12BCD*]
	[*BD13AC]	[*AC13BD]	[B14ACD*]	[*BC15AD]	[*AB15CD]	,	,	
				-	-			l
Open:	[24ABCD*]							
	[18ABCD*]							
Closed:	[*ABCD0]	[CD3AB*]	[*ACD4B]	[BD6AC*]	[AD6BC*]	[*BCD6A]	[*ABD7C]	[BC8AD*]
Closed:	[*ABCD0] [AC8BD*]	[CD3AB*] [AB8CD*]	[*ACD4B] [*ABD9C]	[BD6AC*] [*ABC9D]	[AD6BC*] [D10ABC*]	[*BCD6A] [*AD11BC]	[*ABD7C] [C12ABD*]	[BC8AD*] [A12BCD*]
Closed:								
Closed:	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]		
Closed:	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]		
Closed:	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]		
Closed: Open:	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]		
	[AC8BD*] [*BD13AC]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]		
	[AC8BD*]	[AB8CD*]	[*ABD9C]	[*ABC9D]	[D10ABC*]	[*AD11BC]		
Open:	[AC8BD*] [*BD13AC] [18ABCD*]	[AB8CD*] [*AC13BD]	[*ABD9C] [B14ACD*]	[*ABC9D] [*BC15AD]	[D10ABC*] [*AB15CD]	[*AD11BC] [*CD16AB]	[C12ABD*]	[A12BCD*]
	[AC8BD*] [*BD13AC]  [18ABCD*]	[AB8CD*] [*AC13BD]	[*ABD9C] [B14ACD*]	[*ABC9D] [*BC15AD]	[D10ABC*] [*AB15CD]	[*AD11BC] [*CD16AB]	[C12ABD*]	[A12BCD*]
Open:	[AC8BD*] [*BD13AC] [18ABCD*]	[AB8CD*] [*AC13BD]	[*ABD9C] [B14ACD*]	[*ABC9D] [*BC15AD]	[D10ABC*] [*AB15CD]	[*AD11BC] [*CD16AB]	[C12ABD*]	[A12BCD*]