

Puzzles

Regular Expression Crossword

[illegible]

Brain Teasers

- A. What is the least number of changes required to turn the word “work” into “play”, where the only operations allowed are to add, remove or change a letter, and each intermediate word must also be in English?
- B. There’s a king in the land of Binaria who’s planning on throwing an enormous party, and has amassed 1000 bottles of wine for the occasion. A would-be assassin breaks into the cellar where he’s storing this wine, and proceeds to poison one of the 1000 bottles, but gets away too quickly for the king’s guard to see which one he poisoned or to catch him.

The king needs the remaining 999 safe bottles for his party in 4 weeks. Thankfully, the king has 10 servants who he considers disposable. The poison takes about 3 weeks to take effect, and any amount of it will kill whoever drinks it. How can he figure out which bottle was poisoned in time for the party?

Hint. The king will have to mix wine for this to work.

Hint. It's easier to think of this in binary numbers.

Issue 104 Solutions

Brain Teasers

- A.** You need to get the same probability for both of you; cannot be done in one flip, but can with two flips. H, T and T, H have the same probability. If the two throws are H H or T T, throw again. **B.** Binary trees.

Takuzu

0	1	1	0	0	1	0	0	1	1
1	0	0	1	1	0	1	1	0	0
0	1	0	1	0	1	0	1	1	0
1	0	1	0	1	0	1	0	0	1
0	1	1	0	1	1	0	1	0	0
1	0	0	1	0	1	1	0	1	0
0	1	1	0	1	0	1	0	0	1
1	0	0	1	1	0	0	1	1	0
0	1	1	0	0	1	0	1	0	1
1	0	0	1	0	0	1	0	1	1

Crossword

Takuzu

		O		1			O
1	1				O		
	1			1			
						1	1
		O		1			
			O			O	
		O					
	1	1		O	1		1
1	1			O			O

				D					E						
				Y		C	O	M	P	L	E	X	I	T	Y
				N		O					P				
				A		R		B		O					
	S			M		R		F	I	B	O	N	A	C	C
O	P	T	I	M	I	S	E	D		G		E			
	A			C		C		O				N		P	
	R			P		T						T		S	
	S		T	U	R	I	N	G	M	A	C	H	I	N	E
	E			O		E						A		U	
				G		S						L		D	
				R		S								O	
				T	H	E	T	A						C	
				M						H	A	M	I	L	T
				M										O	N
														D	
			K	O	N	I	G	S	B	E	R	G		E	
					N										
S	T	R	I	N	G		M	A	T	C	H	I	N	G	

■ *Emily Saunders Walmsley*