Sudoku

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1   section1

this is a sentence.

$$E = MC^2 E_a \qquad (1)$$

game status

P1 \P2	rock	scissor	paper
rock		P1	P2
scissor	P2		P1
paper	P1	P2	

State \Symbol	R	S	P
Rock	T	F	F
Scissor	F	T	F
Paper	F	F	T

Player 1 status

R	S	P	R_2	S_2	P_2	Win_1	Win_2	$Draw$	Satisfied
T	F	F	T	F	F	F	F	F	F
T	F	F	F	T	F	T	F	F	T
T	F	F	F	F	T	F	F	F	F
F	T	F	T	F	F	F	F	F	F
F	T	F	F	T	F	F	F	F	F
F	T	F	F	F	T	T	F	F	F
F	F	T	T	F	F	T	F	F	F
F	F	T	F	T	F	F	F	F	F
F	F	T	F	F	T	F	F	F	F
T	F	F	T	F	F	F	F	F	F
T	F	F	F	T	F	T	F	F	T
T	F	F	F	F	T	F	F	F	F
F	T	F	T	F	F	F	F	F	F
F	T	F	F	T	F	F	F	F	F
F	T	F	F	F	T	T	F	F	F
F	F	T	T	F	F	T	F	F	F
F	F	T	F	T	F	F	F	F	F
F	F	T	F	F	T	F	F	F	F

R	S	P	R_2	S_2	P_2	Win_1	Win_2	$Draw$	Satisfied
T	F	F	T	F	F	F	F	T	T
T	F	F	F	T	F	T	F	F	T
T	F	F	F	F	T	F	T	F	T
F	T	F	T	F	F	F	T	F	T
F	T	F	F	T	F	F	F	T	T
F	T	F	F	F	T	T	F	F	T
					.				
					.				
					.				
T	T	F	T	F	F	F	F	F	F

$$fact1 \wedge fact2 \wedge fact3 \wedge \cdots \wedge factN$$

$$(A \vee B \vee C \ldots) \wedge (D \vee E \vee F \ldots) \wedge (\ldots$$

(A or B or C ...) and (D or E or F ...) and (....

$$P \Rightarrow Q$$

P	Q	$P \Rightarrow Q$
T	T	T
F	T	T
F	F	T
T	F	F

$$R \Leftrightarrow \neg P \wedge \neg S \tag{2}$$

$$(R \vee (\neg P \wedge \neg S)) \wedge (\neg R \vee \neg P \vee \neg S) \tag{3}$$

$$(R \vee S \vee P) \tag{4}$$

$$(\neg R \vee (\neg S \wedge \neg P)) \wedge (R \vee S \vee P) \tag{5}$$

$$(\neg R \vee (\neg S \wedge \neg P)) \tag{6}$$

$$(\neg R \vee (\neg S \wedge \neg P)) \wedge (\neg S \vee (\neg R \wedge \neg P)) \wedge (\neg P \vee (\neg S \wedge \neg R)) \tag{7}$$

$$(\neg R \vee \neg P) \wedge (\neg R \vee \neg S) \wedge (\neg S \vee \neg P) \tag{8}$$

$$\underbrace{(\neg R \vee \neg P) \wedge (\neg R \vee \neg S) \wedge (\neg S \vee \neg P)}_{at\ most\ one} \wedge \underbrace{(R \vee S \vee P)}_{at\ least\ one} \tag{9}$$

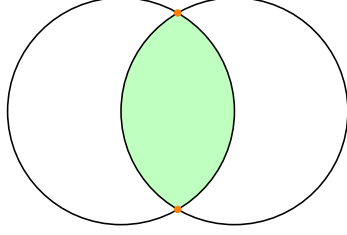| math	python
$\neg$	not
$\sim$	not
$\vee$	or
$\wedge$	and

$$P \Rightarrow R1, R \Rightarrow S1, S \Rightarrow P1 \tag{10}$$

$$(\neg P \vee R) \wedge (\neg P \vee S) \wedge (\neg R \vee S) \tag{11}$$

$$R_{(x,y)} \tag{12}$$

$$R_{(0,0)}, R_{(x\_max,\ y\_max)} \tag{13}$$

$$R_{(0,0)} \wedge R_{(x\_max,\ y\_max)} \wedge \cdots \tag{14}$$

$$R_{(1,3)} \Rightarrow R_{(2,3)} \tag{15}$$

$$R_{(x,h)} \Rightarrow R_{(x+1,\ y\_max)} \tag{16}$$

$$R_{(w,y)} \Rightarrow R_{(x\_max,\ y+1)} \tag{17}$$

$$R_{(1,\ 1)} \Rightarrow R_{(2,\ 1)} \vee R_{(1,\ 2)} \tag{18}$$

$$(\neg R_{(1,\ 1)} \vee R_{(2,\ 1)} \vee R_{(1,\ 2)}) \tag{19}$$

$$R_{(2,\ 1)} \Rightarrow \neg R_{(1,\ 2)} \tag{20}$$

$$R_{(1,\ 2)} \Rightarrow \neg R_{(2,\ 1)} \tag{21}$$

$$(\neg R_{(2,\ 1)} \vee \neg R_{(1,\ 2)}) \wedge (\neg R_{(1,\ 2)} \vee R_{(2,\ 1)}) \tag{22}$$

$$(\neg R_{(2,\ 1)} \vee \neg R_{(1,\ 2)}) \tag{23}$$

$$\cdots \wedge (\neg R_{(1,\ 1)} \vee R_{(2,\ 1)} \vee R_{(1,\ 2)}) \wedge (\neg R_{(2,\ 1)} \vee \neg R_{(1,\ 2)}) \wedge \cdots \tag{24}$$

$$R_{(3,0)} \Rightarrow R_{(3,1)} \tag{25}$$

$$\cdots \wedge (\neg R_{(3,0)} \vee R_{(3,1)}) \wedge \cdots \tag{26}$$

$$R_{(0,3)} \Rightarrow R_{(1,3)} \tag{27}$$

$$\cdots \wedge (\neg R_{(0,3)} \vee R_{(1,3)}) \wedge \cdots \tag{28}$$