

Representation ①:

Represent The homes as variables and 1 Domain Containing all Nationalities, colors, ... etc

Representation ②:

Represent all Nationalities, Colors, ... etc as variables & each categorie ~~is~~ is a domain

Representation ② would make the back tracking easier since only one of each domain will correspond each variable

<u>Nationalities :-</u>	<u>Colors :-</u>	<u>Animal :-</u>	<u>Drinks :-</u>
Englishman = <del>N1</del> N <sub>1</sub>	Red = C <sub>1</sub>	Dog = A <sub>1</sub>	Orange = D <sub>1</sub>
Spaniard = N <sub>2</sub>	Yellow = C <sub>2</sub>	Snail = A <sub>2</sub>	Tea = D <sub>2</sub>
Norwegian = N <sub>3</sub>	Green = C <sub>3</sub>	Fox = A <sub>3</sub>	Coffee = D <sub>3</sub>
UKRAIN = N <sub>4</sub>	Ivory = C <sub>4</sub>	Horse = A <sub>4</sub>	Milk = D <sub>4</sub>
Japanese = N <sub>5</sub>	Blue = C <sub>5</sub>	Zebra = A <sub>5</sub>	Water = D <sub>5</sub>

<u>Smoking</u>	<u>Constraints</u>		
Kools = S <sub>1</sub>	a) N <sub>1</sub> = C <sub>1</sub>	f)  N <sub>3</sub> - C <sub>3</sub>   = 1	k)  S <sub>1</sub> - A <sub>4</sub>   = 1
Chester = S <sub>2</sub>	b) N <sub>2</sub> = A <sub>1</sub>	g) S <sub>3</sub> = A <sub>2</sub>	l) D <sub>3</sub> = C <sub>3</sub>
Winston = S <sub>3</sub>	c) N <sub>3</sub> = 1	h) S <sub>4</sub> = D <sub>1</sub>	m) C <sub>3</sub> - C <sub>4</sub> = 1
Lucky = S <sub>4</sub>	d) S <sub>1</sub> = C <sub>2</sub>	i) N <sub>4</sub> = D <sub>2</sub>	n) D <sub>4</sub> = 3
Parliaments = S <sub>5</sub>	e)  S <sub>2</sub> - A <sub>2</sub>   = 1	j) N <sub>5</sub> = S <sub>5</sub>	

Subject: \_\_\_\_\_

Date 1/1/2023

	①	②	③	④	⑤
Nationality	Norwegian	Ukrainian	English	Spanish	Japanese
Colors	Yellow	Blue	Red	Ivory	Green
Animals	Fox	Horse	Snail	Dog	Zebra
Drinks	Water	Tea	Milk	Orange	Coffee
Smoking	Kools	Chester	Winston	Lucky	Parklancers

① 3 choices	1 choice					Water → Norwegian House ①
② 4 choices		3	2	2	2	
③ 5 choices						
④ 4 choices		4	4	4	3	Zebra → Japanese House ⑥
⑤ 3 choices						
⑥ 5 choices		4	3	3	2	1
⑦ 4 choices		3	2	1		
⑧ 3 choices		3	2			
⑨ 4 choices		3	3	2	1	
⑩ 5 choices		1				
⑪ 3 choices		1				
⑫ 2 choices						
⑬ 1 choice						