① uns derivable from { uvr, 7t, tvg 1s, r → 7g}

from the theorem of deduction:

MVR, 7t, tugAs, R→72 1—UAS if and only if we prove this using the definition of deduction

f1: 4/1 = 70→1

f2: 1t

f3: tyghs

f4. K → 7g = 7K/7g

f5: (70 → n) → (u → 7n) - axisom A3 (modus tollens)

f6. (k → 72) → (7k → 2) - axism A3 (m.t.) f1, f5 | mp 11 → 7k

f6: U→71 = 70 V71

44,46 +mp TR → 2

fx: 11 → 2 = KV2

there are no other formulas we can apply, therefore us is not derivable from the given set of propositional formulas

(usr, rt, togs, r > 12 \(\times us)

Propositional logic is decidable, and it can be proved by constructing the truth table for any given propositional formula.

```
Astolus Adriam Claudiu
1
     HI: Anyone who makes on 'A' at logic ex. studies or is brill. or lucky
      H2: No CS student is lucky
      H3: Morey is a CS stud. and mode on 'A' at logic ex.
      44: Morry likes to party and does not study
      C: Mory is brilliant
  symbotic proof methods: def. of deduction, th. of deduction & its reverse, resolution
   Morry - comstant
  Priedicate symbols: ALE(X): D->{T, FJ, ALE(X)=T if a student makes an 'A' at
   Norciables: x
                       ST(x): D -> {T, Fy, ST(x)=T if a student studies
                      BR(X):0-> }T, Fy, BR(X)=T if a student is brilliant
                       IL(X): D -> (T, F), IL(X) FT if a stud. is lucky
                      LP(X): D = {T, FS, LP(X) = T if a stud. likes to porty
                      CS(x):D = 7T, Fy, CS(x)=T if a stud. is a cs notud.
  B-the domain: the universe of students
   HI: (4x) ALE(x) -> (ST(X) V BR(X) V IL(X))
   H2: (4x) CS(x) → 71L(x)
   HB: CS(Mory) NALE(Mory) = f51 f6
  H4: LP(Mory) A TST (Mory) - f7 1/8
  C: BR (Mary
      H2 Luniv.inst, CS(Mory) -> TIL(MARY) : f3
     HI Fui. ALE (Morey) -> (ST(Morey) VBR (Morey) VJL (Morey): $5 $ 10
    for the time ST (Hovey) VBR (Hovey) VIL (Hovey): fil
   75, fg+mp 71L(Mary): $12
    fints ton. BR (Havey) VIL (Havey): f13
   fighting to BR(Hovey) = C
```

Astoly Adrian Claudiu

(HI, H2, H3, H4, £5, £6, £7, £8, £9, £10, £11, £12, £13) is the proof of C. Therefore, Havy is brilliant

imperence rules used:

universal inst.: (4x) U(x) - U(t), t is a term

megns bousus: n' n→ A F A

3 Boolean function St

1. 11		. 1		a. in a	ingately 4, 12
digit	X	Xa	X3	44	27
0	0	0	0	0	0
1	0	0	0	1	0
2	٥	0	A	0	1
3	0	0	4	A B	1
4	0	4	0	0	-1100
5	0	1	0	4	1
6	0	1	1	0	1
7	0	4	1	1	0
8	1	0	0	0	1
3	1	0	0	1	1.
do	1	0	1	0	1
-	1	0	4	4	
-	1	1	0	0	1
-	1	A	0	1	1
_	1	1	1	0	1
-	1	1	1	1	1

57 =	(x,x2x3x4) V (x,x2x3x4) V (x,x2x3x4) V
1	1(x1x2x3x4)V(x1x2x3x4)V(x1x2x3x4)V
\ \	(x1x2x3x4) V (x1x2x3x4) V (x1x2x3x4) V
() () () () ()	(x, x, x, x,) V (x, x, x, x, V) V (x, x, x, x, x, V) V
	$V(X_1X_2X_3X_5) =$
	M. M.

= m2 V m3 V m4 V m5 V mc V m8 V mg V m10 V Vm HV m12 V m13 V m 14 V m15 - DCF

XIXZ X3X4	00	01	44	10	
00			(m3)	ws	
01	my	m5		(W.C	
11	LINIS	CW 13	m15	m15	
10	m8	cmg	(m 1)	(WID	

tornough diggtrom

 $max_1 = m_8 v m_9 v m_{10} v m_{11} v m_{12} v m_{13} v m_{14} v m_{15} = x_1 - triple factorization$ $<math>max_2 = m_4 v m_5 v m_{12} v m_{13} = x_2 x_3 - double factorization$ $<math>max_3 = m_2 v m_6 v m_{14} v m_{10} = x_3 x_4 - double fact.$

maxy = m3vm2 = x1x2x3- simple fact.

max 5 = m3 v m 11 = x2 x3 x4 - simple fact.

maxe = my vme = x, x2 x4 - simple fact.

Mp(St) = {mox, mox2, mox3, mox4, mox5, mox6 } - moximal momens

Cf(St) = {mox1, mox2 } are central moments, because m5, m15, ---, are

circled early ence

 $Cf(S_{\uparrow}) \neq \emptyset$, $Cf(S_{\downarrow}) \neq Sf(S_{\downarrow}) = g = mox_1 \vee mox_2$

 $f_1^{S}(S_{\frac{1}{4}}) = g \vee mox_3 \vee mox_4 =$ $= \times_1 \vee \times_2 \times_3 \vee \times_3 \times_4 \vee \times_1 \times_2 \times_3$ $\times_1 \vee \times_2 \times_3 \vee \times_3 \times_4 \vee \times_1 \times_2 \times_3$ $\times_2 \vee \times_3 \vee$

n ements Interdali ne 236/2011 pantra arrabassa Recolumentalai cadra privind stabilina procipiilo enerale de respecto a unui pest secunte și compune vacaste. (seplamentaliai de organizare și foreșenare a Spindului Otășanare "De Valor Russa". • Aconesca Subsidial Dimense "De Valor Bussa" i ados

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Art.i. În vederen erranizării și deslâștreru concursillai pontru ocuparat unui post de ingrijitone, ce damită defermitarii. la Socia Pediavile, se constituie ecretaia de soluționare concurs, acuel:

L de Skerler Univers - preyet wele consister 2. de Pales Carmen 3. as Califor Stelesco Fesser 3. as Califor Stelesco Fesser

Art.Z. De aducerez le înteplinir a prezenta detivit se va ingriji preşedin

Aut.3. Prezenta decizie s-a redectat în 7 stangiare din care cate ca exemplar se inminentă. Plor în sauză, un cosmolar câmâne la doar cat ecocisiei și un exemplar la biroul RUMOS.

