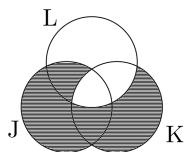


ŽUPANIJSKO NATJECANJE IZ LOGIKE 2021.—RJEŠENJA

Zadatak 1.

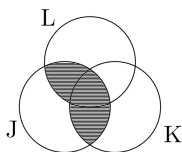
a)



$$\frac{JaK}{KaL} \\ \underline{JaL}$$

Valjan: **DA**

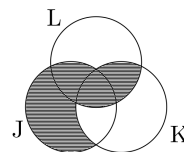
b)



$$\frac{LeJ}{KeJ} \\ \underline{KeL}$$

Valjan: **NE**

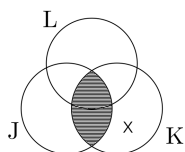
c)



$$\frac{JaK}{LeK} \\ \underline{JeL}$$

Valjan: **DA**

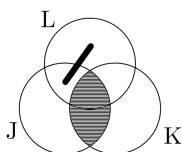
d)



$$\frac{JeK}{KoL} \\ \underline{LiL}$$

Valjan: **NE**

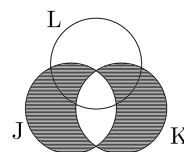
e)



$$\frac{KeJ}{LoK} \\ \underline{LoL}$$

Valjan: **NE**

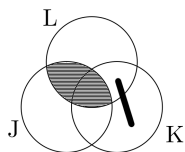
f)



$$\frac{KaJ}{JaK} \\ \underline{LaL}$$

Valjan: **DA**

g)



$$\frac{KoJ}{LeJ} \\ \underline{KiK}$$

Valjan: **DA**

Zadatak 2.

a) I, b) I, c) I, d) I, e) I,
f) N, g) I, h) I, i) I, j) N

Zadatak 3.

1	$(A \wedge B) \rightarrow ((C \wedge D) \rightarrow (E \vee F))$	pretp.
2	C	pretp.
3	$(A \wedge D) \wedge \neg F$	pretp.
4	B	pretp.
5	$A \wedge D$	\wedge i, 3
6	A	\wedge i, 5
7	$A \wedge B$	\wedge u, 4, 6
8	$(C \wedge D) \rightarrow (E \vee F)$	\rightarrow i, 1, 7
9	D	\wedge i, 5
10	$C \wedge D$	\wedge u, 2, 9
11	$E \vee F$	\rightarrow i, 8, 10
12	E	pretp.
13	E	op., 12
14	F	pretp.
15	$\neg F$	\wedge i, 3
16	\perp	\perp u, 14, 15
17	E	\perp i, 16
18	E	\forall i, 11, 12–13, 14–17
19	$B \rightarrow E$	\rightarrow u, 4–18
20	$((A \wedge D) \wedge \neg F) \rightarrow (B \rightarrow E)$	\rightarrow u, 3–19
21	$C \rightarrow (((A \wedge D) \wedge \neg F) \rightarrow (B \rightarrow E))$	\rightarrow u, 2–20

Bodovanje je opisano u zadatku.

Zadatak 4.

a) 1. I, 2. N, 3. ?, 4. I, 5. N, 6. ?, 7. I, 8. ?, 9. I, 10. I

b) 1. $u_1 \neg u_4$, 2. $u_1 \neg u_6$, 3. $u_2 \neg u_6$, 4. 0, 5. $u_2 \neg u_6$, 6. $u_1 \neg u_6$, 7. u_1 , 8. $u_1, u_3 \neg u_6$, 9. u_1, u_2 , 10. $u_2 \neg u_5$