

Državno natjecanje iz logike 2026. - rješenja A-kategorije

1.

**Infiksni zapis**

**Poljski zapis**

- |  |                  |
|--|------------------|
| 1. $(p \rightarrow q) \rightarrow (\neg q \rightarrow \neg p)$                                 | $CCpqCNqNp$      |
| 2. $((p \vee q) \wedge \neg r) \rightarrow s$  | $CKApqNrs$       |
| 3. $\neg((p \rightarrow q) \wedge (q \rightarrow r))$  | $NKCpqCqr$       |
| 4. $((p \wedge q) \rightarrow (r \vee s)) \leftrightarrow (\neg r \rightarrow (p \vee s))$     | $ECKpqArsCNrAps$ |
| 5. $((p \rightarrow (q \wedge r)) \vee (\neg s \rightarrow t))$                                | $ACpKqrCNst$     |
| 6. $\neg((p \leftrightarrow q) \rightarrow (r \wedge \neg s))$                                 | $NCEpqKrNs$      |
| 7. $((p \vee (q \wedge r)) \rightarrow (\neg s \vee t)) \wedge (u \rightarrow v)$              | $KCApKqrANstCuv$ |
| 8. $\neg(((p \rightarrow q) \rightarrow r) \leftrightarrow (p \rightarrow (q \rightarrow r)))$ | $NECCpqrCpCqr$   |
| 9. $((p \leftrightarrow q) \wedge (\neg q \vee r)) \rightarrow (p \wedge r)$                   | $CKE pqANqrKpr$  |

2.

1. NE
2. DA
3. DA
4. DA
5. NE
6. DA
7. NE
8. NE

3. 1)

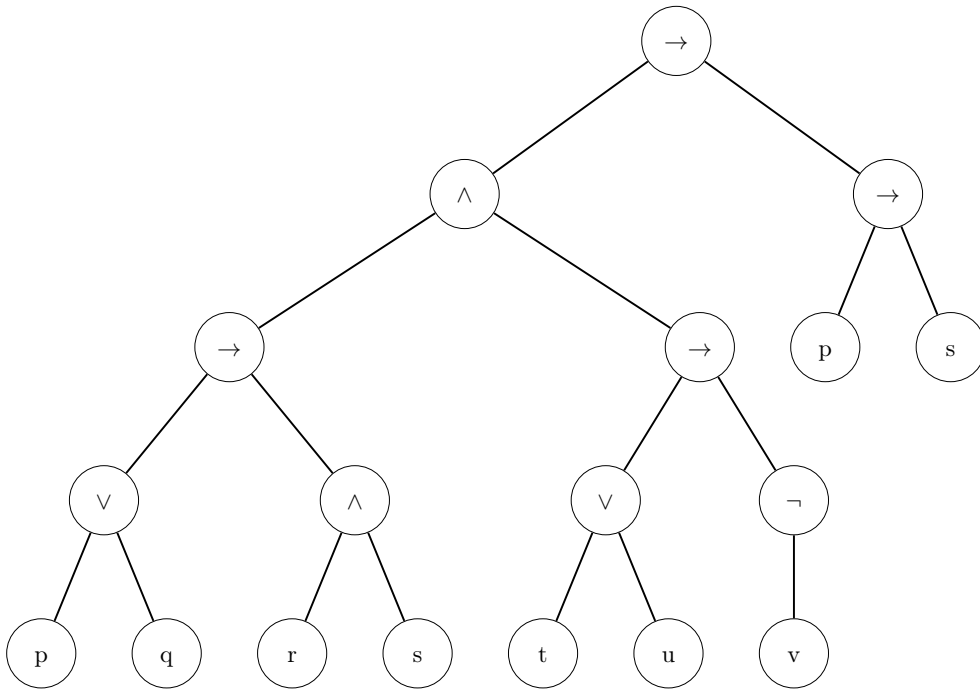
Br.	T	Z	O	K
1.		X	X	
2.		X	X	
3.		X	X	
4.			X	X
5.			X	X
6.	X	X		
7.		X	X	
8.		X	X	

2) DA

4

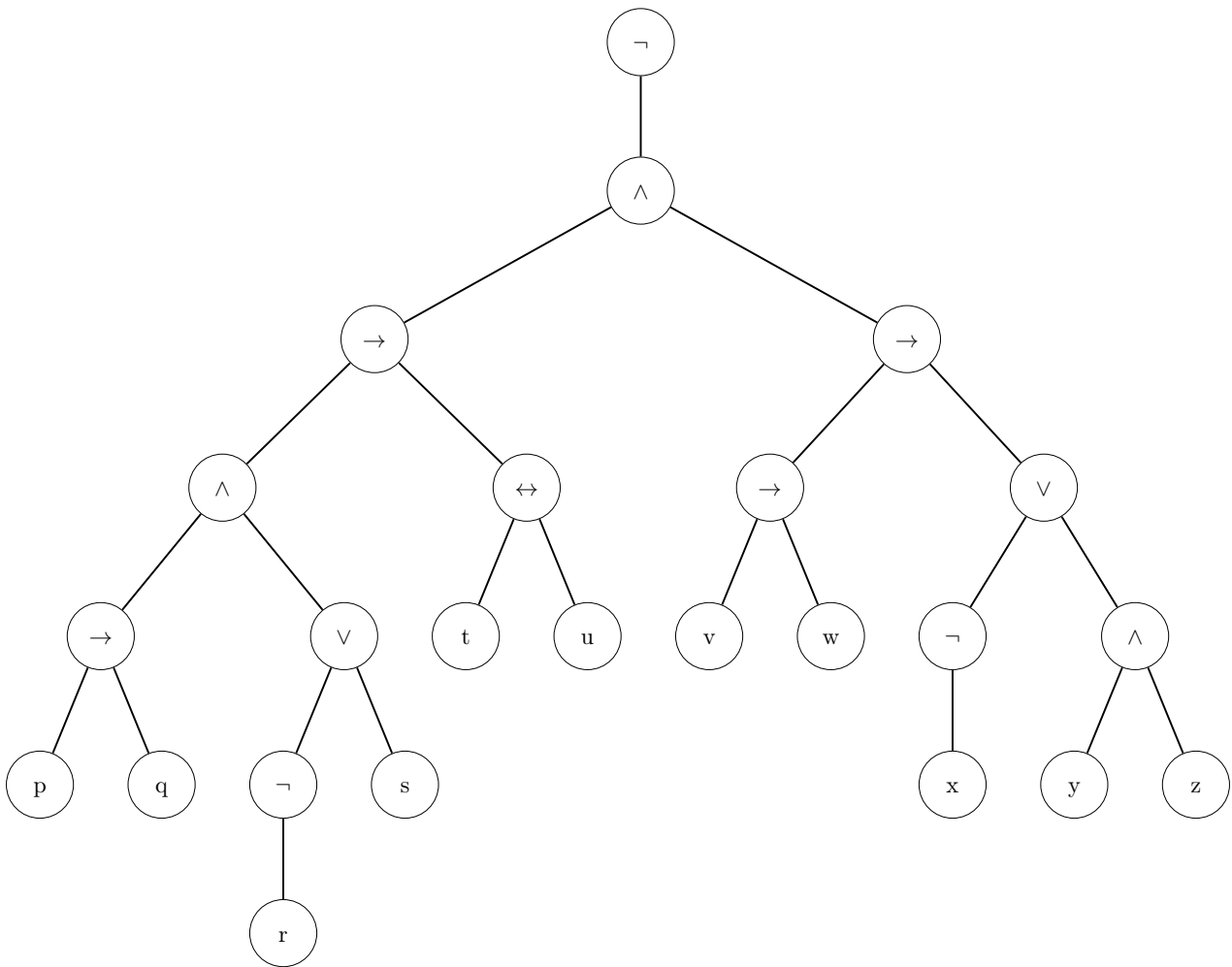
Br.	Formula	Status
1	$(p \rightarrow q) \wedge p \wedge \neg q \wedge (q \rightarrow p)$	A
2	$(p \rightarrow q) \wedge (\neg q \rightarrow r)$	N
3	$((p \rightarrow q) \wedge (q \rightarrow r)) \rightarrow (p \rightarrow r)$	T
4	$((p \wedge \neg p) \wedge (r \vee \neg r)) \wedge (q \wedge \neg q)$	A
5	$((p \wedge q) \rightarrow p) \wedge (r \vee \neg r)$	N
6	$(p \vee q) \wedge \neg q$	N
7	$((p \wedge (p \rightarrow q)) \rightarrow q) \wedge \neg(r \wedge \neg r)$	T
8	$(p \vee \neg p) \wedge \neg(s \wedge \neg s)$	N

5. (a) *CKCApqKrsCAtuNvCps*



$$(((p \vee q) \rightarrow (r \wedge s)) \wedge ((t \vee u) \rightarrow \neg v)) \rightarrow (p \rightarrow s)$$

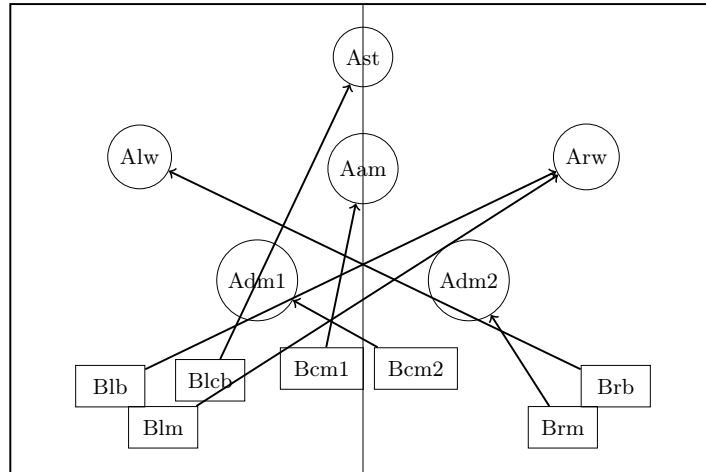
(b)  $NKCKCpqANrsEtuCCvwANxKyz$



$$\neg(((p \rightarrow q) \wedge (\neg r \vee s)) \rightarrow (t \leftrightarrow u)) \wedge ((v \rightarrow w) \rightarrow (\neg x \vee (y \wedge z)))$$

6.

(a)



(b)

1.  $Mark(Brb, Alw)$
2.  $Mark(Bcm1, Aam)$
3.  $Mark(Brm, Adm2)$
4.  $\exists x(Mark(x, Adm1) \wedge CM(x))$
5.  $Mark(Bcm2, Aam)$

DA

DA

DA

DA

NE