

2001
 « »
 « »
 :
 - 05; - 03; - 05.22.00;
 - 01.05.01; - 01.04.00; - 02;
 - 01.01.00. - 01.02.00;
 4,
 8
 :
 ; - ; - ; - ; - ; - ; - ;
 :
 Z1 - 05.22.00.
 Z2 - 05.
 Z3 - 03.
 Z4 - 02.
 Z5 - 01.05.01.
 Z6 - 01.04.00.
 Z7 - 01.02.00.
 Z8 - 01.01.00.
 :
 x1 - (-)
 x2 - (.)
 x3 - (.)
 x4 - (.)

$x5 -$ (. .)
 $x6 -$ (.)
 $x7 -$ (.)
 $x8 -$ (. .)

:

$Y1 -$. . ; $Y2 -$. . ; $Y3 -$. . ; $Y4 -$. . . ; $Y5 -$. . . ; $Y6 -$. . . ;
 $Y7 -$. . ; $Y8 -$. . .

- :
1. $p1(, x5) - 1$ (. .) (. .).
 2. $p2(Z2, x2) - 1$ (. .) .
 3. $p3(, x1) - 2$ (. .) (- .).
 4. $p4(,) - 2$ (. .) (. . .).
 5. $p5(, Y3) - 2$ (. .) .
 6. $p6(, Y6) - 3$ (. . .).
 7. $p7(Z3, x3) - 4$ (. .) , - , 3
(. . .).
 8. $p8(, Y2) - 5$ (. .) , - , 4
(. .) .
 9. $p9(, x1) - 3$ (. . .) (- .).
 10. $p10(, x4) - 3$ (. .) (. .) .
 11. $p11(, x7) - 4$ (. . .) (.) .
 12. $p12(,) - 4$ (. .) (. . .) .
 13. $p13(x5, x6) - 6$ (. .) (.) .

$p14(Y, Z) -$, , $Y,$ -

Z.

- 1 :
- (. .) (. .) - (. .) :
 $p1(, x5) \Rightarrow p14(, x5);$
 - $\frac{1}{1}$ (. .) - (. .) - (. .) ,
: $p2(Z2, x2) \Rightarrow p14(, x2).$

- 2 :
- (. .) (- .) - (. .) (- .) ,
2 , ,
:

$p3(, x1) \Rightarrow p14(, x1).$

- 3 :
- (. .) (. .) - (. .) - (. .) :
 $p10(, x4) \Rightarrow p14(, x4).$

4 :

- $(\dots) \quad (\cdot), (\cdot)$, $(\dots) -$
 $(\cdot) - (\cdot)$:

$$p_{11}(, x7) \Rightarrow p_{14}(, x7).$$
- (\cdot) (\dots) , 4 $(\cdot) - (\cdot) -$
 (\cdot) :

$$p_7(Z3, x3) \Rightarrow p_{14}(, x3).$$

$$6 \quad (\cdot) \quad (\cdot) - (\cdot) - (\cdot),$$

$$p_{13}(x5, x6) \Rightarrow p_{14}(, x6).$$

$$((p_1(, x5) \Rightarrow p_{14}(, x5)) \quad (p_2(Z2, x2) \Rightarrow p_{14}(, x2)) \quad (p_3(, x1) \Rightarrow$$

$$\Rightarrow p_{14}(, x1)) \quad (p_{10}(, x4) \Rightarrow p_{14}(, x4)) \quad (p_{11}(, x7) \Rightarrow$$

$$\Rightarrow p_{14}(, x7)) \quad (p_7(Z3, x3) \Rightarrow p_{14}(, x3)) \quad (p_{13}(x5, x6) \Rightarrow$$

$$\Rightarrow p_{14}(, x6))) \Rightarrow p_{14}(, Y1) \Rightarrow ((\cdot) \Rightarrow p_{14}(, x8)). \quad (1)$$

(1) :

$$((\cdot) \Rightarrow p_{14}(, Y1)) \Rightarrow ((\cdot) \Rightarrow p_{14}(, x8)). \quad (2)$$

(2) :

$$((\cdot) \vee p_{14}(, Y1)) \quad ((\cdot) \vee p_{14}(, x8)). \quad (3)$$

(3) :

1. $(\cdot) \vee p_{14}(, Y1).$
2. $(\cdot).$
3. $p_{14}(, x8).$
4. $p_{14}(, Y1).$ 1 2,
5. $\dots(\cdot)$ 3 4. $Y1$ $x8,$
 $\dots(\cdot) \quad (\cdot) \dots p_{14}(a, x8).$

1 :

- $(\cdot) \quad (\cdot)$ 1, 2 $p_{14}(a, x8)$, :
- $(\cdot) - (\cdot)$:

$$p_1(, x5) \Rightarrow p_{14}(, x5);$$
- $(\cdot) - (\cdot)$:

$$p_2(Z2, x2) \Rightarrow p_{14}(, x2);$$

- $(\dots) - (\dots)$:

$$p14(a, x8) \Rightarrow p14(\dots, x8).$$

2 :

(\dots) (\dots) , (\dots) (\dots) - :

- $(\dots) - (\dots)$:

$$p3(\dots, x1) \Rightarrow p14(\dots, x1);$$

- $(\dots) - (\dots)$:

$$(p4(\dots) p14(\dots, x6)) \Rightarrow p14(\dots, x6).$$

$(\dots) - (\dots)$

4 :

- (\dots) $\cdot 4$ (\dots) (\dots) $(\dots) - (\dots)$:

$$p11(\dots, x7) \Rightarrow p14(\dots, x7).$$

5 :

- (\dots) $(\dots) - (\dots)$, \dots , 4 (\dots) .

$$p8(\dots, Y2) \Rightarrow p14(\dots, x3).$$

$$\begin{aligned} &(((p1(\dots, x5) \Rightarrow p14(\dots, x5)) (p2(Z2, x2) \Rightarrow p14(\dots, x2)) (p14(a, x8) \Rightarrow \\ &\Rightarrow p14(\dots, x8)) (p3(\dots, x1) \Rightarrow p14(\dots, x1)) ((p4(\dots) p14(\dots, x6)) \Rightarrow \\ &\Rightarrow p14(\dots, x6)) (p11(\dots, x7) \Rightarrow p14(\dots, x7)) (p8(\dots, Y2) \Rightarrow p14(\dots, x3))) \Rightarrow \\ &\Rightarrow p14(\dots, Y2)) \Rightarrow ((\dots) \Rightarrow p14(\dots, x4)). \end{aligned} \tag{4}$$

(4)

$$((\dots) \Rightarrow p14(\dots, Y2)) \Rightarrow ((\dots) \Rightarrow p14(\dots, x4)). \tag{5}$$

(5)

$$((\dots) \vee p14(\dots, Y2)) ((\dots) \vee p14(\dots, x4)). \tag{6}$$

(6)

1. $(\dots) \vee p14(\dots, Y2)$.
2. (\dots) .
3. $p14(\dots, x4)$.

.....

4. $p_{14}(, Y_2)$. 1 2,

5. $(, .)$ $(, .)$, $p_{14}(, x_4)$. Y_2 x_4 ,

$(, .)$ $(, . .)$

2

$(, .)$

$(, .)$

- $(, .)$
- $(, .)$
- $(-)$
- $(, .)$
- $(, .)$
- $(, .)$
- $(, .)$

$(, .)$ $(, .)$:

$p_{14}(, x_2)$.

$(, . .)$

- $(, . .) - (, .)$,
- $(, . .) - (, .)$,
- $(, . .) - (-) (3 4)$,
- $(, . .) - (, .) (7 12)$,
- $(, . .) - (, .) (10 12)$,
- $(, . .) - (, .) (1 12)$,
- $(, . .) - (, .) (11 12)$.

$(, . .) - (, .)$:

$14(, x_6)$.

V.A. Kondratenko

DEMONSTRATING THE ADVANTAGES OF AXIOMATIC MODELING ON EXAMPLE
OF SOLVING A SIMPLE INTELLECTUAL PROBLEM

The modern theory of intellectual problems solving has reached such a level, when one can make a scientifically reasonable statement about the existence of a unique algorithm for solving any intellectual task. As an example of solving intellectual problems, we choose the problem of determining the scientific specialty of each of the eight participants of the chess tournament between the members of NAS of Ukraine. On this example, we demonstrate the potential of axiomatic modeling.

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