Вербицький Артем ІПС-21

1. P_{81}:

$81+1 = 82 = 64 + 16 + 2 = 2^1 + 2^4 + 2^6$

$a_1 = 1$
$a_2 = 4-1-1 = 2$
$a_3 = 6-4-1 = 1$

1) $S(0)$
2) $T(0,0)$
3) $S(0)$

2. $f(x_1, x_2, x_3) = [\sqrt{x_3}]$

$x_4 = [\sqrt{x_3}]$

$x_4 \le \sqrt{x_3} < x_4 + 1$

$x_4^2 \le x_3 < (x_4+1)^2$

$x_3 + 1 \le x_4^2 + 2x_4 + 1$

$\mu_{x_4}((x_3+1) \le (x_4^2 + 2x_4 + 1)) = \mu_{x_4}((x+1) \dot{-} (x_4 \cdot x_4 + x_4 + x_4 + 1) = 0)$

$M(S^3(\ominus, S^2(S, I_3^4), S^2(S, S^3(\oplus, I_4^4, S^3(\oplus, I_4^4, S^3(\otimes, I_4^4, I_6^4]]]]]]$

⊖ ОТ: $R(I_1^1, S^2(R(S^2(e, I_1^3), I_1^3))$ $f(x_1, x_2) = x_1 \dot{-} x_2$

⊗ ОТ: $R(I_1^4, S^3(\oplus, I_1^5, I_5^5))$ $f(x_1, x_2, x_3, x_4)$, $h(x_1, x_2, x_3, x_4, x_5)$

$f(x_1, x_2, x_3, x_4) = x_1 \cdot x_2$

$x_5 = f(x_1, x_2, x_3, x_4)$

⊕ ОТ: $R(I_1^5, S^2(S, I_5^5))$ $f(x_1, x_2, x_3, x_4) = x_1 + x_2$

$R(x_1, x_2, x_3, x_4, x_5)$ $f(x_1, x_2, x_3, x_4) = x_1 + x_2$

3. $f(x, y, z) = 2z - y$

0	1	2	3	4
x	y	z	e	e

1) $T(2, 0)$
2) $J(3, 2, 6)$
3) $S(3)$
4) $S(0)$
5) $J(0, 0, 2)$
6) $J(e, 1, 10)$
7) $S(1)$
8) $S(4)$
9) $J(e, e, 6)$
10) $T(4, 0)$

4. $f(x) = neg(\subset X/3 I)$

a_1 $q_0 1 \to q_1 1 R$
a_2 $q_1 1 \to q_2 1 R$
a_3 $q_2 1 \to q_3 1 R$
a_4 $q_3 1 \to q_3 1 R$
a_5 $q_3 \lambda \to q_4 \lambda L$
a_6 $q_4 1 \to q_4 \lambda L$
a_7 $q_4 \lambda \to q_5 \lambda$
a_8 $q_0 \lambda \to q^* 1$
a_9 $q_1 \lambda \to q^*$
a_{10} $q_2 \lambda \to q_5 \lambda L$
a_{11} $q_5 1 \to q_5 \lambda L$
a_{12} $q_5 \lambda \to q^* 1$

$3 \subset^4(0, 1, 1, 1) + 2 = 3 \cdot 19 + 2 = 59$

$3 \subset^4(1, 1, 2, 1) + 2 = 3 \cdot 376 + 2 = 1130$

$Q = \{q_0, q_1, q_2, q_3, q_4, q_5, q_6, (q^*)\}$, $T = \{\lambda, 1\}$

$\rho(M) = 2^{59} + 2^{1130} + 2^{a_3} + 2^{a_4} + 2^{a_5} + 2^{a_6} + 2^{a_7} + 2^{a_8} + 2^{a_9} + 2^{a_{10}} + 2^{a_{11}} + 2^{a_{12}}$