

t126_pboole
(TMc5TNAevpZ7R62Yd3vCkXwuYR59LMkoY36)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_pboole : \iota \Rightarrow \iota$ be given. Let $r3_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0) \wedge (v1_funct_1 X1) \wedge (v1_partfun1 X1 X0))) \Rightarrow (\neg r3_pboole X0 X1 (k1_pboole X0))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0) \wedge (v1_funct_1 X1) \wedge (v1_partfun1 X1 X0)) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge (v4_relat_1 X2 X0) \wedge (v1_funct_1 X2) \wedge (v1_partfun1 X2 X0))) \Rightarrow (\neg (r4_pboole X0 X1 X2) \wedge (\forall X3.((v1_relat_1 X3) \wedge (v4_relat_1 X3 X0) \wedge (v1_funct_1 X3) \wedge (v1_partfun1 X3 X0)))) \Rightarrow (\neg (r1_pboole X0 X3 X1) \wedge (r1_pboole X0 X3 X2)))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0) \wedge (v1_funct_1 X1) \wedge (v1_partfun1 X1 X0))) \wedge ((v1_relat_1 X2) \wedge (v4_relat_1 X2 X0) \wedge (v1_funct_1 X2) \wedge (v1_partfun1 X2 X0)))) \Rightarrow ((r3_pboole X0 X1 X2) \Leftrightarrow (r1_pboole X0 X1 X2)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k1_pboole X0) \wedge (v4_relat_1 (k1_pboole X0) X0) \wedge (v1_funct_1 (k1_pboole X0) X0) \wedge (v1_partfun1 (k1_pboole X0) X0)) \quad (4)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0) \wedge (v1_funct_1 X1) \wedge (v1_partfun1 X1 X0))) \Rightarrow (\neg r4_pboole X0 X1 (k1_pboole X0)))$$