

t33_bcialg_5

(TMaDh39pA1DaVP214DcRbUmH2p1wUaquk9C)

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Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v8_bcialg_1 : \iota \Rightarrow o$ be given. Let $m1_bcialg_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_bcialg_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
 & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 \\
 & X2 k1_numbers k5_numbers) \Rightarrow (\forall X3.(m2_subset_1 X3 k1_numbers \\
 & k5_numbers) \Rightarrow (\forall X4.(m2_subset_1 X4 k1_numbers k5_numbers) \Rightarrow \\
 & (\forall X5.(m2_subset_1 X5 k1_numbers k5_numbers) \Rightarrow (\forall X6. \\
 & ((v8_bcialg_1 X6) \wedge (m1_bcialg_5 X6 X0 X1 X2 X3)) \Rightarrow (((r1_xxreal_0 \\
 & X1 X4) \wedge (r1_xxreal_0 X3 X5)) \Rightarrow ((v8_bcialg_1 X6) \wedge (m1_bcialg_5 X6 \\
 & X5 X4 X4 X5))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
 & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 \\
 & X2 k1_numbers k5_numbers) \Rightarrow (\forall X3.(m2_subset_1 X3 k1_numbers \\
 & k5_numbers) \Rightarrow ((r1_xxreal_0 X0 (k3_bcialg_5 X0 X1 X2 X3)) \wedge ((r1_xxreal_0 \\
 & X1 (k3_bcialg_5 X0 X1 X2 X3)) \wedge ((r1_xxreal_0 X2 (k3_bcialg_5 X0 X1 \\
 & X2 X3)) \wedge (r1_xxreal_0 X3 (k3_bcialg_5 X0 X1 X2 X3))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
 & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 \\
 & X2 k1_numbers k5_numbers) \Rightarrow (\forall X3.(m2_subset_1 X3 k1_numbers \\
 & k5_numbers) \Rightarrow (\neg(k3_bcialg_5 X0 X1 X2 X3 \neq X0) \wedge ((k3_bcialg_5 X0 X1 \\
 & X2 X3 \neq X1) \wedge ((k3_bcialg_5 X0 X1 X2 X3 \neq X2) \wedge (k3_bcialg_5 X0 X1 X2 X3 \neq \\
 & X3))))))
 \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 k1_numbers k5_numbers) \Rightarrow (\forall X3.(m2_subset_1 X3 k1_numbers \\ & k5_numbers) \Rightarrow (\forall X4.(m2_subset_1 X4 k1_numbers k5_numbers) \Rightarrow \\ & (\forall X5.((v8_bcialg_1 X5) \wedge (m1_bcialg_5 X5 X0 X1 X2 X3)) \Rightarrow ((\\ r1_xreal_0 (k3_bcialg_5 X0 X1 X2 X3) X4) \Rightarrow ((v8_bcialg_1 X5) \wedge (m1_bcialg_5 \\ & X5 X4 X4 X4 X4)))))))))) \end{aligned}$$