

t9_binari_4

(TMdnrC5aG8Y1EAp6dn66pp7HCoeJxaJMFqB)

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Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k20_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 k6_numbers X0) \wedge ((r1_xxreal_0 \\ & X1 X2) \wedge (r1_xxreal_0 X2 (k2_xcmplx_0 X1 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0) \wedge (v1_int_1 X1)) \Rightarrow (k20_binop_2 X0 X1 = k2_xcmplx_0 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0) \wedge (v1_int_1 X1)) \Rightarrow (k20_binop_2 X0 X1 = k20_binop_2 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (v1_xreal_0 X0) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (\forall X2. \\ & (v1_int_1 X2) \Rightarrow ((r1_xxreal_0 X0 (k20_binop_2 X1 X2)) \Rightarrow ((r1_xxreal_0 \\ & k6_numbers X1) \vee ((r1_xxreal_0 k6_numbers X2) \vee ((\neg r1_xxreal_0 \\ & X1 X0) \wedge (\neg r1_xxreal_0 X2 X0)))))) \end{aligned}$$