

t52_xxreal_1

(TMd3Ryb4GMJhMD5228A3Uq8RHC4mE7AkrBu)

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Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow (\forall X3.(v1_xxreal_0 X3) \Rightarrow ((r1_tarski (\\ & k4_xxreal_1 X0 X1) (k1_xxreal_1 X2 X3)) \Rightarrow ((r1_xxreal_0 X1 X0) \vee (\\ & (r1_xxreal_0 X2 X0) \wedge (r1_xxreal_0 X1 X3))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (r1_tarski \\ & (k4_xxreal_1 X0 X1) (k2_xxreal_1 X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((r1_tarski X0 X1) \wedge (r1_tarski \\ & X1 X2)) \Rightarrow (r1_tarski X0 X2) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow (\forall X3.(v1_xxreal_0 X3) \Rightarrow ((r1_tarski (\\ & k2_xxreal_1 X0 X1) (k1_xxreal_1 X2 X3)) \Rightarrow ((r1_xxreal_0 X1 X0) \vee (\\ & (r1_xxreal_0 X2 X0) \wedge (r1_xxreal_0 X1 X3))))))) \end{aligned}$$