

t22_arytm_3 (TMZRtzeK9UVL3b7obHRzoigYh9iptfGtAeX)

October 27, 2020

Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_arytm_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_arytm_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_ordinal3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_arytm_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v3_ordinal1 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\forall X1. \\ & ((v3_ordinal1 X1) \wedge (v7_ordinal1 X1)) \Rightarrow ((\neg(X0 = k1_xboole_0) \wedge (\\ & X1 = k1_xboole_0)) \Rightarrow (r1_arytm_3 (k6_ordinal3 X0 (k3_arytm_3 X0 \\ & X1)) (k6_ordinal3 X1 (k3_arytm_3 X0 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_ordinal1 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\forall X1. \\ & ((v3_ordinal1 X1) \wedge (v7_ordinal1 X1)) \Rightarrow (k4_arytm_3 X0 X1 = k6_ordinal3 \\ & X0 (k3_arytm_3 X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v3_ordinal1 X0) \wedge (v7_ordinal1 X0)) \wedge \\ & ((v3_ordinal1 X1) \wedge (v7_ordinal1 X1))) \Rightarrow (k3_arytm_3 X0 X1 = k3_arytm_3 \\ & X1 X0) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_ordinal1 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\forall X1. \\ & ((v3_ordinal1 X1) \wedge (v7_ordinal1 X1)) \Rightarrow ((\neg(X0 = k1_xboole_0) \wedge (\\ & X1 = k1_xboole_0)) \Rightarrow (r1_arytm_3 (k4_arytm_3 X0 X1) (k4_arytm_3 \\ & X1 X0)))) \end{aligned}$$