

t17_binari_2 (TMUKkSfQbUwyE- hVv2BLcgsFjb2U97rUcoQT)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_margrel1 : \iota$ be given. Let $k6_binari_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_binarith : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_binari_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_binarith : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 \\ & X0)) \wedge ((v3_card_1 X1 X0) \wedge (m1_finseq_1 X1 k6_margrel1)) \wedge ((v3_card_1 \\ & X2 X0) \wedge (m1_finseq_1 X2 k6_margrel1))) \Rightarrow ((v3_card_1 (k6_binari_2 \\ & X0 X1 X2) X0) \wedge (m2_finseq_1 (k6_binari_2 X0 X1 X2) k6_margrel1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \wedge \\ & ((v3_card_1 X1 X0) \wedge (m1_finseq_1 X1 k6_margrel1))) \Rightarrow ((v3_card_1 \\ & (k2_binari_2 X0 X1) X0) \wedge (m2_finseq_1 (k2_binari_2 X0 X1) k6_margrel1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\forall X1. \\ & ((v3_card_1 X1 X0) \wedge (m2_finseq_1 X1 k6_margrel1)) \Rightarrow (\forall X2. \\ & ((v3_card_1 X2 X0) \wedge (m2_finseq_1 X2 k6_margrel1)) \Rightarrow (\forall X3. \\ & ((v3_card_1 X3 X0) \wedge (m2_finseq_1 X3 k6_margrel1)) \Rightarrow ((X3 = k6_binari_2 \\ & X0 X1 X2) \Leftrightarrow (\forall X4. (v7_ordinal1 X4) \Rightarrow ((X4 \in k2_finseq_1 X0) \Rightarrow \\ & (k7_partfun1 k6_margrel1 X3 X4 = k2_binarith (k2_binarith (k7_partfun1 \\ & k6_margrel1 X1 X4) (k7_partfun1 k6_margrel1 (k2_binari_2 X0 X2) \\ & X4)) (k7_partfun1 k6_margrel1 (k4_binarith X0 X1 (k2_binari_2 \\ & X0 X2)) X4))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\forall X1. \\
& ((v3_card_1 X1 X0) \wedge (m2_finseq_1 X1 k6_margrel1)) \Rightarrow (\forall X2. \\
& ((v3_card_1 X2 X0) \wedge (m2_finseq_1 X2 k6_margrel1)) \Rightarrow (\forall X3. \\
& ((v3_card_1 X3 X0) \wedge (m2_finseq_1 X3 k6_margrel1)) \Rightarrow ((X3 = k7_binarith \\
& X0 X1 X2) \Leftrightarrow (\forall X4.(v7_ordinal1 X4) \Rightarrow ((X4 \in k2_finseq_1 X0) \Rightarrow \\
& (k7_partfun1 k6_margrel1 X3 X4 = k2_binarith (k2_binarith (k7_partfun1 \\
& k6_margrel1 X1 X4) (k7_partfun1 k6_margrel1 X2 X4)) (k7_partfun1 \\
& k6_margrel1 (k4_binarith X0 X1 X2) X4))))))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\forall X1. \\
& ((v3_card_1 X1 X0) \wedge (m2_finseq_1 X1 k6_margrel1)) \Rightarrow (\forall X2. \\
& ((v3_card_1 X2 X0) \wedge (m2_finseq_1 X2 k6_margrel1)) \Rightarrow (k6_binari_2 \\
& X0 X1 X2 = k7_binarith X0 X1 (k2_binari_2 X0 X2)))
\end{aligned}$$