

t19_dist_1 (TMHRthxkWhmGuAGXd-
fUZc1MPcWkTdy3pMqk)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k4_dist_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k16_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k9_dist_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ be given. 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcmplx_0 X2) \Rightarrow ((k3_xcmplx_0 X1 X0 = k3_xcmplx_0 X2 X0) \Rightarrow ((X0 = \\ & k6_numbers) \vee (X1 = X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge (m2_finseq_1 X1 X0)) \Rightarrow (k16_rvsum_1 (k9_dist_1 \\ & X0 X1) = k3_finseq_1 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ & (k16_rvsum_1 (k9_dist_1 X0 X1) = k11_binop_2 (k3_finseq_1 X1) (\\ & k18_rvsum_1 (k4_dist_1 X0 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \text{ } np_1) \wedge (m2_subset_1 \text{ } np_1 \text{ } k1_numbers \text{ } k5_numbers)) \wedge \\ & ((m1_subset_1 \text{ } np_1 \text{ } k5_numbers) \wedge (m1_subset_1 \text{ } np_1 \text{ } k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 \text{ } X1 \text{ } X0) \Leftrightarrow (m1_finseq_1 \text{ } X1 \text{ } X0) \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$\forall X0. ((v1_relat_1 \text{ } X0) \wedge ((v1_funct_1 \text{ } X0) \wedge (v1_finseq_1 \text{ } X0))) \Rightarrow (k3_finseq_1 \text{ } X0 = k1_card_1 \text{ } X0) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 \text{ } X0) \wedge (v1_xreal_0 \text{ } X1)) \Rightarrow (k11_binop_2 \text{ } X0 \text{ } X1 = k3_xcmplx_0 \text{ } X0 \text{ } X1) \quad (10)$$

Assume the following.

$$\exists X0. v1_xboole_0 \text{ } X0 \quad (11)$$

Assume the following.

$$\forall X0. (v1_finset_1 \text{ } X0) \Rightarrow ((v1_finset_1 \text{ } (k1_card_1 \text{ } X0)) \wedge (v1_card_1 \text{ } (k1_card_1 \text{ } X0))) \quad (12)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 \text{ } X0) \Rightarrow ((\neg v1_xboole_0 \text{ } (k1_card_1 \text{ } X0)) \wedge (v1_card_1 \text{ } (k1_card_1 \text{ } X0))) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2_finseq_1 \text{ } X1 \text{ } X0) \Rightarrow ((v1_funct_1 \text{ } X1) \wedge (\\ & (v1_finseq_1 \text{ } X1) \wedge (m1_subset_1 \text{ } X1 \text{ } (k1_zfmisc_1 \text{ } (k2_zfmisc_1 \text{ } k5_numbers \\ & \text{ } X0)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 \text{ } X1 \text{ } X0) \Rightarrow ((v1_relat_1 \text{ } X1) \wedge ((v1_funct_1 \text{ } X1) \wedge (v1_finseq_1 \text{ } X1))) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_finset_1 \text{ } X0) \wedge (m1_finseq_1 \text{ } X1 \text{ } X0)) \Rightarrow (m2_finseq_1 \text{ } (k4_dist_1 \text{ } X0 \text{ } X1) \text{ } k1_numbers) \quad (16)$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1_finseq_1 X0 k1_numbers) \Rightarrow (m1_subset_1 (k18_rvsum_1 X0) k1_numbers) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (k11_binop_2 X0 X1 = k11_binop_2 X1 X0) \quad (19)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v1_finset_1 X0)) \Rightarrow (v7_ordinal1 X0) \quad (20)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xreal_0 X0) \quad (22)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0))) \quad (23)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (24)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (25)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge (m2_finseq_1 X1 X0)) \Rightarrow (k18_rvsum_1 (k4_dist_1 X0 X1) = np_1))$$