

t32_afinsq_2 (TMTU-
LYG2wJ8VSPAG3BjqahvGnKqv mhQrPm6)

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Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $r1_afinsq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_recdef_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_afinsq_2 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k23_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 X0 X1) \wedge (\neg v2_xxreal_0 X1) \wedge (v2_xxreal_0 X0))) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_finset_1 X1) \wedge (v6_membered X1)) \Rightarrow (\forall X2.((v1_finset_1 X2) \wedge (v6_membered X2)) \Rightarrow ((r1_afinsq_2 X1 X2) \Rightarrow ((r1_xxreal_0 (k1_afinsq_1 (k4_afinsq_2 X2)) X0) \vee (k1_recdef_1 (k4_afinsq_2 X2) X0 = k1_recdef_1 (k4_afinsq_2 (k2_xboole_0 X1 X2)) (k23_binop_2 X0 (k1_afinsq_1 (k4_afinsq_2 X1)))))))))) \quad (3) \end{aligned}$$

Assume the following.

$$\forall X0.((v1_finset_1 X0) \wedge (v6_membered X0)) \Rightarrow (k1_afinsq_1 (k4_afinsq_2 X0) = k5_card_1 X0) \quad (4)$$

Assume the following.

$$m1_subset_1 \ k1_xboole_0 \ k4_ordinal1 \tag{5}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (k2_xcmplx_0 \ X0 \ k6_numbers = X0) \tag{6}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{7}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{8}$$

Assume the following.

$$\forall X0.(v1_finset_1 \ X0) \Rightarrow (k5_card_1 \ X0 = k1_card_1 \ X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \ X0) \wedge (v7_ordinal1 \ X1)) \Rightarrow (k23_binop_2 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \tag{10}$$

Assume the following.

$$\exists X0.(v1_xboole_0 \ X0) \wedge ((v1_xcmplx_0 \ X0) \wedge ((v1_xxreal_0 \ X0) \wedge (v1_xxreal_0 \ X0))) \tag{11}$$

Assume the following.

$$v3_membered \ k1_numbers \tag{12}$$

Assume the following.

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

Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \tag{14}$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \tag{15}$$

Assume the following.

$$\forall X0.(v1_finset_1 \ X0) \Rightarrow (m1_subset_1 \ (k5_card_1 \ X0) \ k4_ordinal1) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \ X0) \wedge (v7_ordinal1 \ X1)) \Rightarrow (k23_binop_2 \ X0 \ X1 = k23_binop_2 \ X1 \ X0) \tag{17}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (18)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (v1_membered X0) \quad (19)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X0))) \Rightarrow ((v1_xxreal_0 X0) \wedge (v2_xxreal_0 X0)) \quad (20)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0) \wedge (v2_xxreal_0 X0)) \Rightarrow ((\neg v1_xboole_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X0))) \quad (21)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((v7_ordinal1 X0) \wedge (\neg v3_xxreal_0 X0)) \quad (22)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xxreal_0 X0) \quad (23)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xreal_0 X0) \quad (24)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_membered X1)) \quad (25)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xcmplx_0 X1)) \quad (26)$$

Theorem 1

$$\forall X0.((v1_finset_1 X0) \wedge (v6_membered X0)) \Rightarrow (\forall X1. ((v1_finset_1 X1) \wedge (v6_membered X1)) \Rightarrow ((r1_afinsq_2 X0 X1) \Rightarrow ((X1 = k1_xboole_0) \vee (k1_recdef_1 (k4_afinsq_2 X1) k6_numbers = k1_recdef_1 (k4_afinsq_2 (k2_xboole_0 X0 X1)) (k1_afinsq_1 (k4_afinsq_2 X0))))))$$