

t20_afinsq_2 (TM- GoLLm68XSiFJ1xLjkVC8SACbU1uCWSP1)

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Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k1_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k4_afinsq_2 : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_recdef_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (r2_wellord2\ X0\ X1) \Leftrightarrow (k1_card_1\ X0 = k1_card_1\ X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1_finset_1\ X0) \Rightarrow (k5_card_1\ X0 = k1_card_1\ X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1\ X1) \wedge (v5_relat_1\ X1\ X0)) \Rightarrow (k2_relset_1\ X0\ X1 = k10_xtuple_0\ X1) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1\ X0) \wedge ((v5_ordinal1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finset_1\ X0)))) \Rightarrow (k1_afinsq_1\ X0 = k1_card_1\ X0) \quad (4)$$

Assume the following.

$$\forall X0. k1_card_1\ (k1_card_1\ X0) = k1_card_1\ X0 \quad (5)$$

Assume the following.

$$\forall X0. ((v1_relat_1\ X0) \wedge ((v5_ordinal1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finset_1\ X0)))) \Rightarrow (k1_card_1\ X0 = k9_xtuple_0\ X0) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_finset_1 X0) \wedge (v6_membered X0)) \Rightarrow & ((v1_relat_1 \\ (k4_afinsq_2 X0)) \wedge ((v5_relat_1 (k4_afinsq_2 X0) k5_numbers) \wedge & \\ ((v1_funct_1 (k4_afinsq_2 X0)) \wedge ((v2_funct_1 (k4_afinsq_2 X0)) \wedge & \\ ((v5_ordinal1 (k4_afinsq_2 X0)) \wedge (v1_finset_1 (k4_afinsq_2 X0)))))) & \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (r2_wellord2 X0 X1) \Leftrightarrow (\exists X2. ((v1_relat_1 & \\ X2) \wedge (v1_funct_1 X2)) \wedge ((v2_funct_1 X2) \wedge ((k9_xtuple_0 X2 = X0) \wedge & \\ (k10_xtuple_0 X2 = X1)))) & \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_finset_1 X0) \wedge (v6_membered X0)) \Rightarrow (\forall X1. & \\ ((v1_relat_1 X1) \wedge ((v5_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 X1) \wedge & \\ ((v5_ordinal1 X1) \wedge (v1_finset_1 X1)))))) \Rightarrow ((X1 = k4_afinsq_2 X0) \Leftrightarrow & \\ ((k2_relset_1 k5_numbers X1 = X0) \wedge (\forall X2. (v7_ordinal1 X2) \Rightarrow & \\ (\forall X3. (v7_ordinal1 X3) \Rightarrow (\forall X4. (v7_ordinal1 X4) \Rightarrow (& \\ \forall X5. (v7_ordinal1 X5) \Rightarrow (\neg(\neg r1_xxreal_0 X3 X2) \wedge ((\neg r1_xxreal_0 & \\ (k1_afinsq_1 X1) X3) \wedge ((X4 = k1_recdef_1 X1 X2) \wedge ((X5 = k1_recdef_1 & \\ X1 X3) \wedge (r1_xxreal_0 X5 X4)))))))))) & \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0. ((v1_finset_1 X0) \wedge (v6_membered X0)) \Rightarrow (k1_afinsq_1 & \\ (k4_afinsq_2 X0) = k5_card_1 X0) & \end{aligned}$$