t17_afinsq_1 (TMcj6e8Zq154azajhZ9VZ1u9y3QTsUUA1cK)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v5\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $k1\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k2\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0)))) \Rightarrow (k1\_afinsq\_1\ X0 = k1\_card\_1\ X0) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0)))) \Rightarrow (k1\_card\_1\ X0 = k9\_xtuple\_0\ X0) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0)))) \wedge ((v1\_relat\_1\ X1) \wedge ((v5\_ordinal1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finset\_1\ X1))))) \Rightarrow ((v1\_relat\_1\ (k1\_ordinal4\ X0\ X1)) \wedge ((v5\_ordinal1\ (k1\_ordinal4\ X0\ X1)) \wedge ((v1\_funct\_1\ (k1\_ordinal4\ X0\ X1)) \wedge (v1\_finset\_1\ (k1\_ordinal4\ X0\ X1))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge (v1\_funct\_1\ X0))) \wedge ((v1\_relat\_1\ X1) \wedge ((v5\_ordinal1\ X1) \wedge (v1\_funct\_1\ X1)))) \Rightarrow ((v1\_relat\_1\ (k1\_ordinal4\ X0\ X1)) \wedge ((v5\_ordinal1\ (k1\_ordinal4\ X0\ X1)) \wedge (v1\_funct\_1\ (k1\_ordinal4\ X0\ X1)))) \tag{4}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v5\_ordinal1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finset\_1\ X0))))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v5\_ordinal1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finset\_1\ X1))))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v5\_ordinal1\ X2)\wedge(v1\_funct\_1\ X2)))\Rightarrow((X2 = k1\_ordinal4\ X0\ X1)\Leftrightarrow((k9\_xtuple\_0\ X2 = k2\_nat\_1\ (k1\_afinsq\_1\ X0)\ (k1\_afinsq\_1\ X1))\wedge((\forall X3.(v7\_ordinal1\ X3)\Rightarrow((X3 \in k2\_afinsq\_1\ X0)\Rightarrow(k1\_funct\_1\ X2\ X3 = k1\_funct\_1\ X0\ X3)))\wedge(\forall X3.(v7\_ordinal1\ X3)\Rightarrow((X3 \in k2\_afinsq\_1\ X1)\Rightarrow(k1\_funct\_1\ X2\ (k2\_nat\_1\ (k1\_afinsq\_1\ X0)\ X3) = k1\_funct\_1\ X1\ X3)))))))) \tag{5}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v5\_ordinal1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finset\_1\ X0))))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v5\_ordinal1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finset\_1\ X1))))\Rightarrow(k1\_afinsq\_1\ (k1\_ordinal4\ X0\ X1) = k2\_nat\_1\ (k1\_afinsq\_1\ X0)\ (k1\_afinsq\_1\ X1)))$$