t7_afinsq_2 (TMSgVX344Xz764VxBG5wfmi2s4YJaaSsXQM)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v5\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_afinsq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k23\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow ((r1\_xxreal\_0\ X0\ X1) \Rightarrow (r1\_xxreal\_0\ k6\_numbers\ (k6\_xcmplx\_0\ X1\ X0)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (v7\_ordinal1\ X1)) \Rightarrow (k7\_nat\_d\ X0\ X1 = k1\_xreal\_0\ X0\ X1) \tag{2}$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0) \wedge (v1\_xreal\_0\ X1)) \Rightarrow (k10\_binop\_2\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0)))) \Rightarrow (k1\_card\_1\ X0 = k9\_xtuple\_0\ X0) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0)))) \Rightarrow (v7\_ordinal1\ (k9\_xtuple\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v5\_ordinal1\ X0)\wedge(v1\_finset\_1\ X0))))\wedge(v7\_ordinal1\ X1))\Rightarrow((v1\_relat\_1\ (k2\_afinsq\_2\ X0\ X1))\wedge((v1\_funct\_1\ (k2\_afinsq\_2\ X0\ X1))\wedge((v5\_ordinal1\ (k2\_afinsq\_2\ X0\ X1))\wedge(v1\_finset\_1\ (k2\_afinsq\_2\ X0\ X1)))))) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(((r1\_xxreal\_0\ k6\_numbers\ (k6\_xcmplx\_0\ X0\ X1))\Rightarrow(k1\_xreal\_0\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1))\wedge((\neg r1\_xxreal\_0\ k6\_numbers\ (k6\_xcmplx\_0\ X0\ X1))\Rightarrow(k1\_xreal\_0\ X0\ X1 = k6\_numbers)))) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v5\_ordinal1\ X0)\wedge(v1\_finset\_1\ X0))))\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge((v5\_ordinal1\ X2)\wedge(v1\_finset\_1\ X2))))\Rightarrow((X2 = k2\_afinsq\_2\ X0\ X1)\Leftrightarrow((k1\_afinsq\_1\ X2 = k7\_nat\_d\ (k1\_afinsq\_1\ X0)\ X1)\wedge(\forall X3.(v7\_ordinal1\ X3)\Rightarrow((X3 \in k1\_relset\_1\ k5\_numbers\ X2)\Rightarrow(k1\_funct\_1\ X2\ X3 = k1\_funct\_1\ X0\ (k23\_binop\_2\ X3\ X1)))))))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow((r1\_xxreal\_0\ X0\ X1)\vee(r1\_xxreal\_0\ X1\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{11}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xreal\_0\ X0) \tag{12}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge((v5\_ordinal1\ X1)\wedge(v1\_finset\_1\ X1))))\Rightarrow((\neg r1\_xxreal\_0\ (k1\_afinsq\_1\ X1)\ X0)\Rightarrow(k1\_afinsq\_1\ (k2\_afinsq\_2\ X1\ X0) = k10\_binop\_2\ (k1\_afinsq\_1\ X1)\ X0)))$$