t6_grsolv_1 (TMPF76LG8GnnaHCgBvAFZMV7Adh6WUnGCgK)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v15\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v2\_group\_1 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_group\_3 : \iota \Rightarrow \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k7\_group\_2 : \iota \Rightarrow \iota$ be given. Let $k6\_group\_2 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_group\_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_gr\_cy\_1 : \iota \Rightarrow o$ be given. Let $v1\_grsolv\_1 : \iota \Rightarrow o$ be given. Let $v5\_group\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow ((v1\_grsolv\_1\ X0) \Leftrightarrow (\exists X1.(m2\_finseq\_1\ X1\ (k1\_group\_3\ X0)) \wedge ((\neg r1\_xxreal\_0\ (k3\_finseq\_1\ X1)\ k6\_numbers) \wedge ((k1\_funct\_1\ X1\ np\_\_1 = k7\_group\_2\ X0) \wedge ((k1\_funct\_1\ X1\ (k3\_finseq\_1\ X1) = k6\_group\_2\ X0) \wedge (\forall X2.(m1\_subset\_1\ X2\ k5\_numbers) \Rightarrow (((X2 \in k4\_finseq\_1\ X1) \wedge (k2\_nat\_1\ X2\ np\_\_1 \in k4\_finseq\_1\ X1)) \Rightarrow (\forall X3.((v15\_algstr\_0\ X3) \wedge (m1\_group\_2\ X3\ X0)) \Rightarrow (\forall X4.((v15\_algstr\_0\ X4) \wedge (m1\_group\_2\ X4\ X0)) \Rightarrow (((X3 = k1\_funct\_1\ X1\ X2) \wedge (X4 = k1\_funct\_1\ X1\ (k2\_nat\_1\ X2\ np\_\_1))) \Rightarrow (((v15\_algstr\_0\ X4) \wedge ((v1\_group\_3\ X4\ X3) \wedge (m1\_group\_6\ X4\ X0\ X3))) \wedge (\forall X5.((v1\_group\_3\ X5\ X3) \wedge (m1\_group\_6\ X5\ X0\ X3)) \Rightarrow ((X5 = X4) \Rightarrow (v5\_group\_1\ (k5\_group\_6\ X3\ X5)))))))))))))) \tag{1}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0) \Rightarrow (((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (v1\_gr\_cy\_1\ X0)))) \Rightarrow ((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (v5\_group\_1\ X0))))) \tag{2}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v15\_algstr\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0)))))\Rightarrow((\exists X1.(m2\_finseq\_1\ X1\ (k1\_group\_3\ X0))\wedge((\neg r1\_xxreal\_0\ (k3\_finseq\_1\ X1)\ k6\_numbers)\wedge((k1\_funct\_1\ X1\ np\_\_1 = k7\_group\_2\ X0)\wedge((k1\_funct\_1\ X1\ (k3\_finseq\_1\ X1) = k6\_group\_2\ X0)\wedge(\forall X2.(m1\_subset\_1\ X2\ k5\_numbers)\Rightarrow(((X2 \in k4\_finseq\_1\ X1)\wedge(k2\_nat\_1\ X2\ np\_\_1 \in k4\_finseq\_1\ X1))\Rightarrow(\forall X3.((v15\_algstr\_0\ X3)\wedge(m1\_group\_2\ X3\ X0))\Rightarrow(\forall X4.((v15\_algstr\_0\ X4)\wedge(m1\_group\_2\ X4\ X0))\Rightarrow(((X3 = k1\_funct\_1\ X1\ X2)\wedge(X4 = k1\_funct\_1\ X1\ (k2\_nat\_1\ X2\ np\_\_1)))\Rightarrow(((v15\_algstr\_0\ X4)\wedge((v1\_group\_3\ X4\ X3)\wedge(m1\_group\_6\ X4\ X0\ X3)))\wedge(\forall X5.((v1\_group\_3\ X5\ X3)\wedge(m1\_group\_6\ X5\ X0\ X3))\Rightarrow((X5 = X4)\Rightarrow((\neg v2\_struct\_0\ (k5\_group\_6\ X3\ X5))\wedge((v2\_group\_1\ (k5\_group\_6\ X3\ X5))\wedge((v3\_group\_1\ (k5\_group\_6\ X3\ X5))\wedge((v1\_gr\_cy\_1\ (k5\_group\_6\ X3\ X5))\wedge(l3\_algstr\_0\ (k5\_group\_6\ X3\ X5))))))))))))))))\Rightarrow(v1\_grsolv\_1\ X0))$$