t32_anproj_2 (TMGeRwjaL64priyRQDEveohpn8tbVZajYuY)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v5\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v6\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v7\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v8\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $l1\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $v2\_collsp : \iota \Rightarrow o$ be given. Let $v3\_collsp : \iota \Rightarrow o$ be given. Let $v4\_collsp : \iota \Rightarrow o$ be given. Let $v2\_anproj\_2 : \iota \Rightarrow o$ be given. Let $v3\_anproj\_2 : \iota \Rightarrow o$ be given. Let $l1\_collsp : \iota \Rightarrow o$ be given. Let $k5\_anproj\_1 : \iota \Rightarrow \iota$ be given. Let $v8\_anproj\_2 : \iota \Rightarrow o$ be given. Let $r1\_collsp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((\neg v7\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v5\_rlvect\_1\ X0) \wedge ((v6\_rlvect\_1\ X0) \wedge ((v7\_rlvect\_1\ X0) \wedge ((v8\_rlvect\_1\ X0) \wedge (l1\_rlvect\_1\ X0))))))))))) \Rightarrow (\neg (v4\_collsp\ (k5\_anproj\_1\ X0)) \wedge ((v3\_anproj\_2\ (k5\_anproj\_1\ X0)) \wedge ((\exists X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k5\_anproj\_1\ X0))) \wedge (\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k5\_anproj\_1\ X0))) \wedge (\exists X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k5\_anproj\_1\ X0))) \wedge ((\neg r1\_collsp\ (k5\_anproj\_1\ X0)\ X1\ X2\ X3) \wedge (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ (k5\_anproj\_1\ X0))) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ (k5\_anproj\_1\ X0))) \Rightarrow (\exists X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ (k5\_anproj\_1\ X0))) \wedge (\exists X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ (k5\_anproj\_1\ X0))) \wedge ((r1\_collsp\ (k5\_anproj\_1\ X0)\ X4\ X5\ X7) \wedge ((r1\_collsp\ (k5\_anproj\_1\ X0)\ X2\ X3\ X6) \wedge (r1\_collsp\ (k5\_anproj\_1\ X0)\ X1\ X7\ X6))))))))))) \wedge (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_collsp\ X1) \wedge ((v3\_collsp\ X1) \wedge ((v4\_collsp\ X1) \wedge ((v2\_anproj\_2\ X1) \wedge ((v3\_anproj\_2\ X1) \wedge (l1\_collsp\ X1)))))))) \Rightarrow (\neg (X1 = k5\_anproj\_1\ X0) \wedge (v8\_anproj\_2\ X1)))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v7\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v5\_rlvect\_1\ X0)\wedge((v6\_rlvect\_1\ X0)\wedge((v7\_rlvect\_1\ X0)\wedge((v8\_rlvect\_1\ X0)\wedge(l1\_rlvect\_1\ X0)))))))))\Rightarrow(\neg(\exists X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\wedge(\exists X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\wedge(\exists X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\wedge((\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(\exists X6.(m1\_subset\_1\ X6\ k1\_numbers)\wedge(\exists X7.(m1\_subset\_1\ X7\ k1\_numbers)\wedge(\exists X8.(m1\_subset\_1\ X8\ k1\_numbers)\wedge(\exists X9.(m1\_subset\_1\ X9\ k1\_numbers)\wedge(X5 = k3\_rlvect\_1\ X0\ (k3\_rlvect\_1\ X0\ (k3\_rlvect\_1\ X0\ (k1\_rlvect\_1\ X0\ X1\ X6)\ (k1\_rlvect\_1\ X0\ X2\ X7))\ (k1\_rlvect\_1\ X0\ X3\ X8))\ (k1\_rlvect\_1\ X0\ X4\ X9)))))))\wedge(\forall X5.(m1\_subset\_1\ X5\ k1\_numbers)\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ k1\_numbers)\Rightarrow(\forall X7.(m1\_subset\_1\ X7\ k1\_numbers)\Rightarrow(\forall X8.(m1\_subset\_1\ X8\ k1\_numbers)\Rightarrow((k3\_rlvect\_1\ X0\ (k3\_rlvect\_1\ X0\ (k3\_rlvect\_1\ X0\ (k1\_rlvect\_1\ X0\ X1\ X5)\ (k1\_rlvect\_1\ X0\ X2\ X6))\ (k1\_rlvect\_1\ X0\ X3\ X7))\ (k1\_rlvect\_1\ X0\ X4\ X8) = k4\_struct\_0\ X0)\Rightarrow((X5 = k6\_numbers)\wedge((X6 = k6\_numbers)\wedge((X7 = k6\_numbers)\wedge(X8 = k6\_numbers))))))))))))\wedge(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k5\_anproj\_1\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k5\_anproj\_1\ X0)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k5\_anproj\_1\ X0)))\Rightarrow(\neg(\neg r1\_collsp\ (k5\_anproj\_1\ X0)\ X1\ X2\ X3)\wedge(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ (k5\_anproj\_1\ X0)))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ (k5\_anproj\_1\ X0)))\Rightarrow(\exists X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ (k5\_anproj\_1\ X0)))\wedge(\exists X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ (k5\_anproj\_1\ X0)))\wedge(r1\_collsp\ (k5\_anproj\_1\ X0)\ X4\ X5\ X7)\wedge((r1\_collsp\ (k5\_anproj\_1\ X0)\ X2\ X3\ X6)\wedge(r1\_collsp\ (k5\_anproj\_1\ X0)\ X1\ X7\ X6)))))))))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v7\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v5\_rlvect\_1\ X0)\wedge((v6\_rlvect\_1\ X0)\wedge((v7\_rlvect\_1\ X0)\wedge((v8\_rlvect\_1\ X0)\wedge(l1\_rlvect\_1\ X0))))))))))\Rightarrow((\exists X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\wedge(\exists X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\wedge(\exists X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\wedge(\forall X5.(m1\_subset\_1\ X5\ k1\_numbers)\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ k1\_numbers)\Rightarrow(\forall X7.(m1\_subset\_1\ X7\ k1\_numbers)\Rightarrow(\forall X8.(m1\_subset\_1\ X8\ k1\_numbers)\Rightarrow((k3\_rlvect\_1\ X0\ (k3\_rlvect\_1\ X0\ (k3\_rlvect\_1\ X0\ (k1\_rlvect\_1\ X0\ X1\ X5)\ (k1\_rlvect\_1\ X0\ X2\ X6))\ (k1\_rlvect\_1\ X0\ X3\ X7))\ (k1\_rlvect\_1\ X0\ X4\ X8) = k4\_struct\_0\ X0)\Rightarrow((X5 = k6\_numbers)\wedge((X6 = k6\_numbers)\wedge((X7 = k6\_numbers)\wedge(X8 = k6\_numbers))))))))))))\Rightarrow((v4\_collsp\ (k5\_anproj\_1\ X0))\wedge(v3\_anproj\_2\ (k5\_anproj\_1\ X0)))) \tag{3}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v7\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v5\_rlvect\_1\ X0)\wedge((v6\_rlvect\_1\ X0)\wedge((v7\_rlvect\_1\ X0)\wedge((v8\_rlvect\_1\ X0)\wedge(l1\_rlvect\_1\ X0))))))))))\Rightarrow(\neg(\exists X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\wedge(\exists X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\wedge(\exists X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\wedge((\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(\exists X6.(m1\_subset\_1\ X6\ k1\_numbers)\wedge(\exists X7.(m1\_subset\_1\ X7\ k1\_numbers)\wedge(\exists X8.(m1\_subset\_1\ X8\ k1\_numbers)\wedge(\exists X9.(m1\_subset\_1\ X9\ k1\_numbers)\wedge(X5 = k3\_rlvect\_1\ X0\ (k3\_rlvect\_1\ X0\ (k3\_rlvect\_1\ X0\ (k1\_rlvect\_1\ X0\ X1\ X6)\ (k1\_rlvect\_1\ X0\ X2\ X7))\ (k1\_rlvect\_1\ X0\ X3\ X8))\ (k1\_rlvect\_1\ X0\ X4\ X9)))))))\wedge(\forall X5.(m1\_subset\_1\ X5\ k1\_numbers)\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ k1\_numbers)\Rightarrow(\forall X7.(m1\_subset\_1\ X7\ k1\_numbers)\Rightarrow(\forall X8.(m1\_subset\_1\ X8\ k1\_numbers)\Rightarrow((k3\_rlvect\_1\ X0\ (k3\_rlvect\_1\ X0\ (k3\_rlvect\_1\ X0\ (k1\_rlvect\_1\ X0\ X1\ X5)\ (k1\_rlvect\_1\ X0\ X2\ X6))\ (k1\_rlvect\_1\ X0\ X3\ X7))\ (k1\_rlvect\_1\ X0\ X4\ X8) = k4\_struct\_0\ X0)\Rightarrow((X5 = k6\_numbers)\wedge((X6 = k6\_numbers)\wedge((X7 = k6\_numbers)\wedge(X8 = k6\_numbers))))))))))))\wedge(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_collsp\ X1)\wedge((v3\_collsp\ X1)\wedge((v4\_collsp\ X1)\wedge((v2\_anproj\_2\ X1)\wedge((v3\_anproj\_2\ X1)\wedge(l1\_collsp\ X1)))))))\Rightarrow(\neg(X1 = k5\_anproj\_1\ X0)\wedge(v8\_anproj\_2\ X1))))$$