# l42_turing_1 (TMcDE8EaLyaLNbvCh8g9gnMrn2Q392gvYUr)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_turing\_1 : \iota \Rightarrow \iota$ be given. Let $k14\_turing\_1 : \iota$ be given. Let $k4\_numbers : \iota$ be given. Let $k9\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_turing\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_5 : \iota$ be given. Let $k9\_turing\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_mcart\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k1\_real\_1 : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k8\_turing\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_turing\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_turing\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_turing\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_mcart\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_mcart\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_turing\_1 : \iota \Rightarrow o$ be given. Let $u5\_turing\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_turing\_1 : \iota \Rightarrow o$ be given. Let $k7\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k3\_turing\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_mcart\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_mcart\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3\_turing\_1 : \iota \Rightarrow \iota$ be given. Let $k13\_turing\_1 : \iota$ be given. Let $u4\_turing\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(l1\_turing\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k3\_zfmisc\_1\ (u2\_turing\_1\ X0)\ k4\_numbers\ (k9\_funct\_2\ k4\_numbers\ (u1\_turing\_1\ X0)))) \Rightarrow (\forall X2.\forall X3.\forall X4.(X1 = k3\_xtuple\_0\ X2\ X3\ X4) \Rightarrow ((X2 = u5\_turing\_1\ X0) \vee (k9\_turing\_1\ X0\ X1 = k3\_xtuple\_0\ (k1\_mcart\_1\ (u2\_turing\_1\ X0)\ (u1\_turing\_1\ X0)\ (k8\_domain\_1\ k1\_numbers\ (k1\_real\_1\ np\_\_1)\ k6\_numbers\ np\_\_1)\ (k8\_turing\_1\ X0\ X1))\ (k2\_xcmplx\_0\ (k7\_turing\_1\ X0\ X1)\ (k6\_turing\_1\ X0\ (k8\_turing\_1\ X0\ X1)))\ (k5\_turing\_1\ X0\ (k3\_mcart\_1\ (u2\_turing\_1\ X0)\ k4\_numbers\ (k9\_funct\_2\ k4\_numbers\ (u1\_turing\_1\ X0))\ X1)\ (k7\_turing\_1\ X0\ X1)\ (k2\_mcart\_1\ (u2\_turing\_1\ X0)\ (u1\_turing\_1\ X0)\ (k8\_domain\_1\ k1\_numbers\ (k1\_real\_1\ np\_\_1)\ k6\_numbers\ np\_\_1)\ (k8\_turing\_1\ X0\ X1))))))) \tag{1}$$

Assume the following.

$$(v1\_turing\_1\ k14\_turing\_1) \wedge (l1\_turing\_1\ k14\_turing\_1) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_turing\_1\ X0)\wedge(l1\_turing\_1\ X0))\Rightarrow((X0 = k14\_turing\_1)\Leftrightarrow ((u1\_turing\_1\ X0 = k7\_domain\_1\ k5\_numbers\ k6\_numbers\ np\_\_1)\wedge( (u2\_turing\_1\ X0 = k3\_turing\_1\ np\_\_5)\wedge((r1\_funct\_2\ (k2\_zfmisc\_1\ (u2\_turing\_1\ X0)\ (u1\_turing\_1\ X0))\ (k3\_zfmisc\_1\ (u2\_turing\_1\ X0)\ (u1\_turing\_1\ X0)\ (k8\_domain\_1\ k1\_numbers\ (k1\_real\_1\ np\_\_1)\ k6\_numbers\ np\_\_1))\ (k8\_mcart\_1\ k5\_numbers\ k5\_numbers\ (k3\_turing\_1\ np\_\_5)\ (k7\_domain\_1\ k5\_numbers\ k6\_numbers\ np\_\_1))\ (k9\_mcart\_1\ k5\_numbers\ k5\_numbers\ k1\_numbers\ (k3\_turing\_1\ np\_\_5)\ (k7\_domain\_1\ k5\_numbers\ k6\_numbers\ np\_\_1)\ (k8\_domain\_1\ k1\_numbers\ (k1\_real\_1\ np\_\_1)\ k6\_numbers\ np\_\_1))\ (u3\_turing\_1\ X0)\ k13\_turing\_1)\wedge((u4\_turing\_1\ X0 = k6\_numbers)\wedge(u5\_turing\_1\ X0 = np\_\_5)))))) \tag{3}$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1\ X0\ (k3\_zfmisc\_1\ (u2\_turing\_1\ k14\_turing\_1)\ k4\_numbers\ (k9\_funct\_2\ k4\_numbers\ (u1\_turing\_1\ k14\_turing\_1))))\Rightarrow (\forall X1.\forall X2.\forall X3.(X0 = k3\_xtuple\_0\ X1\ X2\ X3)\Rightarrow( (X1 = np\_\_5)\vee(k9\_turing\_1\ k14\_turing\_1\ X0 = k3\_xtuple\_0\ (k1\_mcart\_1\ (u2\_turing\_1\ k14\_turing\_1)\ (u1\_turing\_1\ k14\_turing\_1)\ (k8\_domain\_1\ k1\_numbers\ (k1\_real\_1\ np\_\_1)\ k6\_numbers\ np\_\_1)\ (k8\_turing\_1\ k14\_turing\_1\ X0))\ (k2\_xcmplx\_0\ (k7\_turing\_1\ k14\_turing\_1\ X0)\ (k6\_turing\_1\ k14\_turing\_1\ (k8\_turing\_1\ k14\_turing\_1\ X0)))\ (k5\_turing\_1\ k14\_turing\_1\ (k3\_mcart\_1\ (u2\_turing\_1\ k14\_turing\_1)\ k4\_numbers\ (k9\_funct\_2\ k4\_numbers\ (u1\_turing\_1\ k14\_turing\_1))\ X0)\ (k7\_turing\_1\ k14\_turing\_1\ X0)\ (k2\_mcart\_1\ (u2\_turing\_1\ k14\_turing\_1)\ (u1\_turing\_1\ k14\_turing\_1)\ (k8\_domain\_1\ k1\_numbers\ (k1\_real\_1\ np\_\_1)\ k6\_numbers\ np\_\_1)\ (k8\_turing\_1\ k14\_turing\_1\ X0))))))$$