t25_mod_2 (TMX6eE5RkncTRpDaeBhxWuEVgLWBGoCyWUa)

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Let $m1\_subset\_1 : \iota{\Rightarrow}\iota{\Rightarrow}o$ be given. Let $k1\_enumset1 : \iota{\Rightarrow}\iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k6\_numbers : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k11\_mod\_2 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k10\_mod\_2 : \iota{\Rightarrow}\iota$ be given. Let $k12\_mod\_2 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $v1\_xboole\_0 : \iota{\Rightarrow}o$ be given. Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1){\Rightarrow}((v1\_xboole\_0\ X1){\vee}(X0 \in X1)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1){\Rightarrow}(m1\_subset\_1\ X0\ X1) \tag{2}$$

Assume the following.

$$\exists X0.(m1\_subset\_1\ X0\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)){\wedge}(X0 = np\_\_2) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg v1\_xboole\_0\ (k1\_enumset1\ X0\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(X3 = k1\_enumset1\ X0\ X1\ X2){\Leftrightarrow}(\forall X4.(X4 \in X3){\Leftrightarrow}(\neg(X4{\neq}X0){\wedge}((X4{\neq}X1){\wedge}(X4{\neq}X2)))) \tag{5}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)){\Rightarrow}(\forall X1.(m1\_subset\_1\ X1\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)){\Rightarrow}(((X1 = k6\_numbers){\Rightarrow}(k12\_mod\_2\ X0\ X1 = k6\_numbers)){\wedge}(((X0 = k6\_numbers){\Rightarrow}(k12\_mod\_2\ X0\ X1 = k6\_numbers)){\wedge}(((X1 = np\_\_1){\Rightarrow}(k12\_mod\_2\ X0\ X1 = X0)){\wedge}(((X0 = np\_\_1){\Rightarrow}(k12\_mod\_2\ X0\ X1 = X1)){\wedge}(((X0 = np\_\_2){\wedge}(X1 = np\_\_2)){\Rightarrow}(k12\_mod\_2\ X0\ X1 = np\_\_1))))))) \tag{6}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow (((X0 = k6\_numbers)\Rightarrow(k11\_mod\_2\ X0\ X1 = X1))\wedge(((X1 = k6\_numbers)\Rightarrow (k11\_mod\_2\ X0\ X1 = X0))\wedge((((X0 = np\_\_1)\wedge(X1 = np\_\_1))\Rightarrow(k11\_mod\_2\ X0\ X1 = np\_\_2))\wedge((((X0 = np\_\_1)\wedge(X1 = np\_\_2))\Rightarrow(k11\_mod\_2\ X0\ X1 = k6\_numbers))\wedge((((X0 = np\_\_2)\wedge(X1 = np\_\_1))\Rightarrow(k11\_mod\_2\ X0\ X1 = k6\_numbers))\wedge(((X0 = np\_\_2)\wedge(X1 = np\_\_2))\Rightarrow(k11\_mod\_2\ X0\ X1 = np\_\_1)))))))) \tag{7}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow (((X0 = k6\_numbers)\Rightarrow(k10\_mod\_2\ X0 = k6\_numbers))\wedge(((X0 = np\_\_1)\Rightarrow (k10\_mod\_2\ X0 = np\_\_2))\wedge((X0 = np\_\_2)\Rightarrow(k10\_mod\_2\ X0 = np\_\_1)))) \tag{8}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow (((X3 = k6\_numbers)\wedge(X4 = np\_\_1))\Rightarrow((k11\_mod\_2\ X0\ X1 = k11\_mod\_2\ X1\ X0)\wedge((k11\_mod\_2\ (k11\_mod\_2\ X0\ X1)\ X2 = k11\_mod\_2\ X0\ (k11\_mod\_2\ X1\ X2))\wedge((k11\_mod\_2\ X0\ X3 = X0)\wedge((k11\_mod\_2\ X0\ (k10\_mod\_2\ X0) = X3)\wedge ((k12\_mod\_2\ X0\ X1 = k12\_mod\_2\ X1\ X0)\wedge((k12\_mod\_2\ (k12\_mod\_2\ X0\ X1)\ X2 = k12\_mod\_2\ X0\ (k12\_mod\_2\ X1\ X2))\wedge((k12\_mod\_2\ X4\ X0 = X0)\wedge((\neg(X0\neq X3)\wedge(\forall X5.(m1\_subset\_1\ X5\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow(k12\_mod\_2\ X0\ X5\neq X4)))\wedge((X3\neq X4)\wedge(k12\_mod\_2\ X0\ (k11\_mod\_2\ X1\ X2) = k11\_mod\_2\ (k12\_mod\_2\ X0\ X1)\ (k12\_mod\_2\ X0\ X2))))))))))))))$$