t5_recdef_2 (TMbndYmfeU1tZQ8NMbQY1gN3Yramg94TSBF)

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Let $k4\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k8\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_xtuple\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\ \forall X6.\forall X7.(k6\_xtuple\_0\ X0\ X1\ X2\ X3 \in k4\_zfmisc\_1\ X4\ X5\ X6\ X7) \Leftrightarrow ((X0 \in X4) \wedge ((X1 \in X5) \wedge ((X2 \in X6) \wedge (X3 \in X7)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\neg(X0 \in k4\_zfmisc\_1\ X1\ X2\ X3\ X4) \wedge (\forall X5.\forall X6.\forall X7.\forall X8.\ \neg(X5 \in X1) \wedge ((X6 \in X2) \wedge ((X7 \in X3) \wedge ((X8 \in X4) \wedge (X0 = k6\_xtuple\_0\ X5\ X6\ X7\ X8))))) \tag{2}$$

Assume the following.

$$\forall X0.(v3\_xtuple\_0\ X0) \Rightarrow (k6\_xtuple\_0\ (k7\_xtuple\_0\ X0)\ (k8\_xtuple\_0\ X0)\ (k5\_xtuple\_0\ X0)\ (k2\_xtuple\_0\ X0) = X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.v3\_xtuple\_0\ (k6\_xtuple\_0\ X0\ X1\ X2\ X3) \tag{4}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(X0 \in k4\_zfmisc\_1\ X1\ X2\ X3\ X4) \Rightarrow ((k7\_xtuple\_0\ X0 \in X1) \wedge ((k8\_xtuple\_0\ X0 \in X2) \wedge ((k5\_xtuple\_0\ X0 \in X3) \wedge (k2\_xtuple\_0\ X0 \in X4))))$$