t58_roughs_1 (TMcrNQDKZmH-BYsrZG1eZU1r6FfeAqyFT9dq)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v8\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_roughs\_1 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_roughs\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k6\_roughs\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v8\_struct\_0\ X0) \wedge ((v2\_roughs\_1\ X0) \wedge (l1\_orders\_2\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (((\neg r1\_xxreal\_0\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ k1\_numbers\ (k6\_roughs\_1\ X0\ X1)\ X2)\ k6\_numbers) \wedge (\neg r1\_xxreal\_0\ np\_\_1\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ k1\_numbers\ (k6\_roughs\_1\ X0\ X1)\ X2))) \Leftrightarrow (X2 \in k5\_roughs\_1\ X0\ X1)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge (l1\_orders\_2\ X0)) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (m1\_subset\_1\ (k5\_roughs\_1\ X0\ X1)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X1\ X0)) \tag{5}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v8\_struct\_0\ X0)\wedge((v2\_roughs\_1\ X0)\wedge(l1\_orders\_2\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(k5\_roughs\_1\ X0\ X1 = ReplSep\ (toset\ (\lambda X2 : \iota.m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))\ (\lambda X2 : \iota.(\neg r1\_xxreal\_0\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ k1\_numbers\ (k6\_roughs\_1\ X0\ X1)\ X2)\ k6\_numbers)\wedge(\neg r1\_xxreal\_0\ np\_\_1\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ k1\_numbers\ (k6\_roughs\_1\ X0\ X1)\ X2)))\ (\lambda X2 : \iota.X2)))$$