t31_armstrng (TM-GRUz7C1ZRCuK9TaPk7FGuVqb3PndjdFQp)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_setfam\_1 : \iota \Rightarrow \iota$ be given. Let $k9\_armstrng : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r4\_armstrng : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k9\_setfam\_1\ X0)\ (k9\_setfam\_1\ X0)))) \Rightarrow (k9\_armstrng\ X0\ X1 = ReplSep\ (toset\ (\lambda X2 : \iota.m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\ (\lambda X2 : \iota.\exists X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ X0)) \wedge (r4\_armstrng\ X0\ X1\ X3\ X2))\ (\lambda X2 : \iota.X2)) \tag{1}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k9\_setfam\_1\ X0)\ (k9\_setfam\_1\ X0)))) \Rightarrow ((X1 \in k9\_armstrng\ X0\ X2) \Leftrightarrow (\exists X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ X0)) \wedge (\exists X4.(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ X0)) \wedge ((X1 = X3) \wedge (r4\_armstrng\ X0\ X2\ X4\ X3)))))$$