

# t13\_armstrng (TMFRcW- pRHv87gHGkskxbrsaheU9mDL6oZWC)

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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  $r3\_armstrng : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_armstrng : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_armstrng : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))) \Rightarrow (k6\_armstrng X0 X1 X2 = k4\_tarski X1 X2) \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. k2\_xtuple\_0 (k4\_tarski X0 X1) = X1 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. k1\_xtuple\_0 (k4\_tarski X0 X1) = X0 \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))) \Rightarrow (m1\_subset\_1 (k6\_armstrng X0 X1 X2) (k4\_armstrng X0)) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k4\_armstrng X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k4\_armstrng X0)) \Rightarrow ((r3\_armstrng X0 X1 X2) \Leftrightarrow ((r1\_tarski (k1\_xtuple\_0 X1) (k1\_xtuple\_0 X2)) \wedge (r1\_tarski (k2\_xtuple\_0 X2) (k2\_xtuple\_0 X1)))))) \tag{5}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\ & (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 (k1\_zfmisc\_1 X0)) \Rightarrow \\ & ((r3\_armstrng X0 (k6\_armstrng X0 X1 X2) (k6\_armstrng X0 X3 X4)) \Leftrightarrow \\ & ((r1\_tarski X1 X3) \wedge (r1\_tarski X4 X2)))))) \end{aligned}$$