t55_arytm_3 (TMPGDAcg6sqmsvnTxRGua991HeRr9eZoJgh)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_arytm\_3 : \iota$ be given. Let $k11\_arytm\_3 : \iota$ be given. Let $k10\_arytm\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k12\_arytm\_3 : \iota$ be given. Let $k1\_arytm\_3 : \iota$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3) \Rightarrow (\neg(X0 \neq k11\_arytm\_3) \wedge (\forall X1.(m1\_subset\_1\ X1\ k5\_arytm\_3) \Rightarrow (k10\_arytm\_3\ X0\ X1 \neq np\_\_1))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3) \Rightarrow (k10\_arytm\_3\ X0\ k12\_arytm\_3 = X0) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k5\_arytm\_3) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k5\_arytm\_3) \Rightarrow (k10\_arytm\_3\ (k10\_arytm\_3\ X0\ X1)\ X2 = k10\_arytm\_3\ X0\ (k10\_arytm\_3\ X1\ X2)))) \tag{3}$$

Assume the following.

$$k12\_arytm\_3 = k1\_arytm\_3 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_arytm\_3) \wedge (m1\_subset\_1\ X1\ k5\_arytm\_3)) \Rightarrow (m1\_subset\_1\ (k10\_arytm\_3\ X0\ X1)\ k5\_arytm\_3) \tag{5}$$

Assume the following.

$$k1\_arytm\_3 = np\_\_1 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_arytm\_3) \wedge (m1\_subset\_1\ X1\ k5\_arytm\_3)) \Rightarrow (k10\_arytm\_3\ X0\ X1 = k10\_arytm\_3\ X1\ X0) \tag{7}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k5\_arytm\_3) \Rightarrow (\neg(X0 \neq k11\_arytm\_3) \wedge (\forall X2.(m1\_subset\_1\ X2\ k5\_arytm\_3) \Rightarrow (X1 \neq k10\_arytm\_3\ X0\ X2))))$$