

l42\_arytm\_2 (TM-  
bGUoAVUsH9N1ZW86rivNyRANxVpzqQ7Be)

October 27, 2020

Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_arytm\_3 : \iota$  be given. Let  $k1\_arytm\_2 : \iota$  be given. Let  $k5\_arytm\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 \\ & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2\_subset\_1 X0 (k1\_zfmisc\_1 k5\_arytm\_3) k1\_arytm\_2) \Rightarrow \\ & (\forall X1. (m2\_subset\_1 X1 (k1\_zfmisc\_1 k5\_arytm\_3) k1\_arytm\_2) \Rightarrow \\ & (\forall X2. (m2\_subset\_1 X2 (k1\_zfmisc\_1 k5\_arytm\_3) k1\_arytm\_2) \Rightarrow \\ & (r1\_tarski (k5\_arytm\_2 X0 (k5\_arytm\_2 X1 X2)) (k5\_arytm\_2 (k5\_arytm\_2 \\ & X0 X1) X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_arytm\_2 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1\_subset\_1 X0 k1\_arytm\_2) \wedge (m1\_subset\_1 \\ & X1 k1\_arytm\_2)) \Rightarrow (m2\_subset\_1 (k5\_arytm\_2 X0 X1) (k1\_zfmisc\_1 \\ & k5\_arytm\_3) k1\_arytm\_2) \end{aligned} \quad (4)$$

Assume the following.

$$m1\_subset\_1 k1\_arytm\_2 (k1\_zfmisc\_1 (k1\_zfmisc\_1 k5\_arytm\_3)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1\_subset\_1 X0 k1\_arytm\_2) \wedge (m1\_subset\_1 \\ & X1 k1\_arytm\_2)) \Rightarrow (k5\_arytm\_2 X0 X1 = k5\_arytm\_2 X1 X0) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (8)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 (k1\_zfmisc\_1 k5\_arytm\_3) k1\_arytm\_2) \Rightarrow \\ & (\forall X1.(m2\_subset\_1 X1 (k1\_zfmisc\_1 k5\_arytm\_3) k1\_arytm\_2) \Rightarrow \\ & (\forall X2.(m2\_subset\_1 X2 (k1\_zfmisc\_1 k5\_arytm\_3) k1\_arytm\_2) \Rightarrow \\ & (k5\_arytm\_2 X0 (k5\_arytm\_2 X1 X2) = k5\_arytm\_2 (k5\_arytm\_2 X0 X1 \\ & X2)))) \end{aligned}$$