

# l13\_arytm\_1

(TMY127bWV3LjRfujxjUyzAex5M3MXJ4sQMF)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_arytm\_2 : \iota$  be given. Let  $k1\_arytm\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_arytm\_3 : \iota$  be given. Let  $k7\_arytm\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_arytm\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_arytm\_2) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k2\_arytm\_2) \Rightarrow ((k7\_arytm\_2 X0 X1 = X1) \Rightarrow (X0 = k11\_arytm\_3))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k2\_arytm\_2) \wedge (m1\_subset\_1 X1 k2\_arytm\_2)) \Rightarrow (m1\_subset\_1 (k1\_arytm\_1 X0 X1) k2\_arytm\_2) \quad (2)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_arytm\_2) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k2\_arytm\_2) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k2\_arytm\_2) \Rightarrow (((r1\_arytm\_2 X1 X0) \Rightarrow ((X2 = k1\_arytm\_1 X0 X1) \Leftrightarrow (k7\_arytm\_2 X2 X1 = X0))) \wedge ((\neg r1\_arytm\_2 X1 X0) \Rightarrow ((X2 = k1\_arytm\_1 X0 X1) \Leftrightarrow (X2 = k11\_arytm\_3)))))) \quad (3)$$

## Theorem 1

$$\forall X0.(m1\_subset\_1 X0 k2\_arytm\_2) \Rightarrow (k1\_arytm\_1 X0 X0 = k11\_arytm\_3)$$