

t15\_arytm\_0  
(TMc3dytXTyLTYhkYfYdtezrdDAMwQXAB1o6)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k2\_arytm\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_arytm\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_arytm\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $c2\_arytm\_0 : \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 k1\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_numbers) \Rightarrow (k2\_arytm\_0 \\ X0 (k1\_arytm\_0 X1 X2) = k1\_arytm\_0 (k2\_arytm\_0 X0 X1) (k2\_arytm\_0 \\ X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 k1\_numbers) \Rightarrow ((X1 = k6\_numbers) \Rightarrow (k2\_arytm\_0 X0 X1 = k6\_numbers))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (m1\_subset\_1 (k3\_arytm\_0 X0) k1\_numbers) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (m1\_subset\_1 X1 k1\_numbers)) \Rightarrow (m1\_subset\_1 (k2\_arytm\_0 X0 X1) k1\_numbers) \tag{4}$$

Assume the following.

$$m1\_subset\_1 c2\_arytm\_0 k1\_numbers \tag{5}$$

Assume the following.

$$c2\_arytm\_0 = k6\_numbers \tag{6}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 k1\_numbers) \Rightarrow ((X1 = k3\_arytm\_0 X0) \Leftrightarrow (k1\_arytm\_0 X0 X1 = k6\_numbers))) \end{aligned} \tag{7}$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 X0 k1\_numbers) \wedge (m1\_subset\_1 X1 k1\_numbers)) \Rightarrow (k2\_arytm\_0 X0 X1 = k2\_arytm\_0 X1 X0) \quad (8)$$

**Theorem 1**

$$\forall X0. (m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1. (m1\_subset\_1 X1 k1\_numbers) \Rightarrow (k2\_arytm\_0 (k3\_arytm\_0 X0) X1 = k3\_arytm\_0 (k2\_arytm\_0 X0 X1)))$$