

t78\_arytm\_3

(TMLbR1xmKumbJUyW9rxioBeKRcTwmGbTwQv)

October 27, 2020

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

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k5\_arytm\_3) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k5\_arytm\_3) \Rightarrow ((k10\_arytm\_3 \\ & X0 X1 = k10\_arytm\_3 X0 X2) \Rightarrow ((X0 = k11\_arytm\_3) \vee (X1 = X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (k10\_arytm\_3 X0 k11\_arytm\_3 = k11\_arytm\_3) \quad (2)$$

Assume the following.

$$m1\_subset\_1 k11\_arytm\_3 k5\_arytm\_3 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_arytm\_3) \wedge (m1\_subset\_1 X1 k5\_arytm\_3)) \Rightarrow (k10\_arytm\_3 X0 X1 = k10\_arytm\_3 X1 X0) \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k5\_arytm\_3) \Rightarrow (\neg(k10\_arytm\_3 X0 X1 = k11\_arytm\_3) \wedge ((X0 \neq k11\_arytm\_3) \wedge \\ & (X1 \neq k11\_arytm\_3)))) \end{aligned}$$