

# l40\_arytm\_3 (TMQAytwBJdQXMFQWPfzPV- gYLBovs7C47PH7)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_arytm\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $np\_1 : \iota$  be given. Assume the following.

$$\begin{aligned}
 & k4\_tarski\ np\_1\ np\_1 \in ReplSep2\ (toset\ (\lambda X0 : \iota.m1\_subset\_1 \\
 & \quad X0\ k4\_ordinal1))\ (\lambda X0 : \iota.toset\ (\lambda X1 : \iota.m1\_subset\_1 \\
 & \quad X1\ k4\_ordinal1))\ (\lambda X0 : \iota.\lambda X1 : \iota.(r1\_arytm\_3\ X0\ X1) \wedge \\
 & \quad (X1 \neq k1\_xboole\_0))\ (\lambda X0 : \iota.\lambda X1 : \iota.k4\_tarski\ X0\ X1)
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Leftrightarrow (\forall X1.\neg X1 \in X0) \tag{2}$$

## Theorem 1

$$\begin{aligned}
 & \neg v1\_xboole\_0\ (ReplSep2\ (toset\ (\lambda X0 : \iota.m1\_subset\_1\ X0\ k4\_ordinal1)) \\
 & \quad (\lambda X0 : \iota.toset\ (\lambda X1 : \iota.m1\_subset\_1\ X1\ k4\_ordinal1)) \\
 & \quad (\lambda X0 : \iota.\lambda X1 : \iota.(r1\_arytm\_3\ X0\ X1) \wedge (X1 \neq k1\_xboole\_0)) \\
 & \quad (\lambda X0 : \iota.\lambda X1 : \iota.k4\_tarski\ X0\ X1))
 \end{aligned}$$