

# t34\_arytm\_3 (TMRGdJkun- QVXPM2c8j7iKTbDfJPhVAdAYGq)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_arytm\_3 : \iota$  be given. Let  $r1\_arytm\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_arytm\_3 : \iota \Rightarrow \iota$  be given. Let  $k7\_arytm\_3 : \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (r1\_arytm\_3 np\_1 X0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow & (\neg(\neg X0 \in k4\_ordinal1) \wedge \\ & (\forall X1.(m1\_subset\_1 X1 k4\_ordinal1) \Rightarrow (\forall X2.(m1\_subset\_1 \\ X2 k4\_ordinal1) \Rightarrow & (\neg(X0 = k4\_tarski X1 X2) \wedge ((r1\_arytm\_3 X1 X2) \wedge \\ & (X2 \neq k1\_xboole\_0) \wedge (X2 \neq np\_1))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4\_tarski X0 X1 = k4\_tarski X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1 X0) \wedge (v3\_ordinal1 X1)) \Rightarrow (r1\_arytm\_3 X0 X1) \Rightarrow (r1\_arytm\_3 X1 X0) \quad (4)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \quad (5)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (m1\_subset\_1 (k7\_arytm\_3 X0) k4\_ordinal1) \quad (6)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (m1\_subset\_1 (k6\_arytm\_3 X0) k4\_ordinal1) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 k4\_ordinal1) \Rightarrow (((X0 \in k4\_ordinal1) \Rightarrow ((X1 = k7\_arytm\_3 X0) \Leftrightarrow (X1 = \\ np\_1))) \wedge ((\neg X0 \in k4\_ordinal1) \Rightarrow ((X1 = k7\_arytm\_3 X0) \Leftrightarrow (\exists X2. \\ ((v3\_ordinal1 X2) \wedge (v7\_ordinal1 X2)) \wedge (X0 = k4\_tarSKI X2 X1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 k4\_ordinal1) \Rightarrow (((X0 \in k4\_ordinal1) \Rightarrow ((X1 = k6\_arytm\_3 X0) \Leftrightarrow (X1 = \\ X0))) \wedge ((\neg X0 \in k4\_ordinal1) \Rightarrow ((X1 = k6\_arytm\_3 X0) \Leftrightarrow (\exists X2. \\ ((v3\_ordinal1 X2) \wedge (v7\_ordinal1 X2)) \wedge (X0 = k4\_tarSKI X1 X2)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \Rightarrow ((m1\_subset\_1 X1 X0) \Leftrightarrow (X1 \in X0))) \wedge ((v1\_xboole\_0 X0) \Rightarrow ((m1\_subset\_1 X1 X0) \Leftrightarrow (v1\_xboole\_0 X1))) \quad (10)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v3\_ordinal1 X1)) \quad (11)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (r1\_arytm\_3 (k6\_arytm\_3 X0) (k7\_arytm\_3 X0))$$