

# t53\_arytm\_3

## (TMEybKACLiqsmpb4yp2Dmi2kPxxeoxcvozi)

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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  $k12\_arytm\_3 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k11\_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k8\_arytm\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_arytm\_3 : \iota \Rightarrow \iota$  be given. Let  $k7\_arytm\_3 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k9\_ordinal3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_arytm\_3 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow ((k11\_ordinal2 np\_1 X0 = X0) \wedge (k11\_ordinal2 X0 np\_1 = X0)) \quad (1)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (k8\_arytm\_3 (k6\_arytm\_3 X0) (k7\_arytm\_3 X0) = X0) \quad (2)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow ((X0 \in k4\_ordinal1) \Leftrightarrow (k7\_arytm\_3 X0 = np\_1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((v3\_ordinal1 X0) \wedge (v7\_ordinal1 X0)) \wedge ((v3\_ordinal1 X1) \wedge (v7\_ordinal1 X1))) \Rightarrow (k9\_ordinal3 X0 X1 = k11\_ordinal2 X0 X1) \quad (5)$$

Assume the following.

$$k12\_arytm\_3 = k1\_arytm\_3 \quad (6)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (m1\_subset\_1 (k7\_arytm\_3 X0) k4\_ordinal1) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (m1\_subset\_1 (k6\_arytm\_3 X0) k4\_ordinal1) \quad (8)$$

Assume the following.

$$(\neg v1\_xboole\_0 k12\_arytm\_3) \wedge ((v3\_ordinal1 k12\_arytm\_3) \wedge (m1\_subset\_1 k12\_arytm\_3 k5\_arytm\_3)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k4\_ordinal1) \Rightarrow (((X0 \in k4\_ordinal1) \Rightarrow ((X1 = k6\_arytm\_3 X0) \Leftrightarrow (X1 = \\ & X0))) \wedge ((\neg X0 \in k4\_ordinal1) \Rightarrow ((X1 = k6\_arytm\_3 X0) \Leftrightarrow (\exists X2. \\ & ((v3\_ordinal1 X2) \wedge (v7\_ordinal1 X2)) \wedge (X0 = k4\_tarSKI X1 X2)))))) \end{aligned} \quad (10)$$

Assume the following.

$$k1\_arytm\_3 = np\_1 \quad (11)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Leftrightarrow (X0 \in k4\_ordinal1) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k5\_arytm\_3) \Rightarrow (k10\_arytm\_3 X0 X1 = k8\_arytm\_3 (k9\_ordinal3 (k6\_arytm\_3 \\ & X0) (k6\_arytm\_3 X1)) (k9\_ordinal3 (k7\_arytm\_3 X0) (k7\_arytm\_3 \\ & X1)))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_arytm\_3) \wedge (m1\_subset\_1 X1 k5\_arytm\_3)) \Rightarrow (k10\_arytm\_3 X0 X1 = k10\_arytm\_3 X1 X0) \quad (14)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (15)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (v3\_ordinal1 X0) \quad (16)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_arytm\_3) \Rightarrow ((v3\_ordinal1 X0) \Rightarrow ((v3\_ordinal1 X0) \wedge (v7\_ordinal1 X0))) \quad (17)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 \ X0 \ k5\_arytm\_3) \Rightarrow (k10\_arytm\_3 \ X0 \ k12\_arytm\_3 = X0)$$