

# t3\_arithm

## (TMKCvRNSE3HVjoL6rkVjp1qDisJd5rTa9Zn)

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Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_numbers : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_arytm\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k2\_arytm\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_arytm\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k3\_arytm\_0 : \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k5\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (\exists X1.(m1\_subset\_1 X1 k1\_numbers) \wedge (\exists X2.(m1\_subset\_1 X2 k1\_numbers) \wedge (X0 = k5\_arytm\_0 X1 X2))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k1\_numbers) \Rightarrow ((X1 = np\_1) \Rightarrow (k2\_arytm\_0 X0 X1 = X0))) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k1\_numbers) \Rightarrow ((X1 = k6\_numbers) \Rightarrow (k2\_arytm\_0 X0 X1 = k6\_numbers))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k1\_numbers) \Rightarrow ((X1 = k6\_numbers) \Rightarrow (k1\_arytm\_0 X0 X1 = X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \quad (10)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (11)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (12)$$

Assume the following.

$$k3\_arytm\_0 k6\_numbers = k6\_numbers \quad (13)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \quad (14)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (\forall X2. \\ & (X2 = k3\_xcmplx\_0 X0 X1) \Leftrightarrow (\exists X3.(m1\_subset\_1 X3 k1\_numbers) \wedge \\ & (\exists X4.(m1\_subset\_1 X4 k1\_numbers) \wedge (\exists X5.(m1\_subset\_1 \\ & X5 k1\_numbers) \wedge (\exists X6.(m1\_subset\_1 X6 k1\_numbers) \wedge ((X0 = \\ & k5\_arytm\_0 X3 X4) \wedge ((X1 = k5\_arytm\_0 X5 X6) \wedge (X2 = k5\_arytm\_0 (k1\_arytm\_0 \\ & (k2\_arytm\_0 X3 X5) (k3\_arytm\_0 (k2\_arytm\_0 X4 X6))) (k1\_arytm\_0 \\ & (k2\_arytm\_0 X3 X6) (k2\_arytm\_0 X4 X5)))))))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 k1\_numbers) \Rightarrow (((X1 = k6\_numbers) \Rightarrow (k5\_arytm\_0 X0 X1 = X0)) \wedge (( \\ X1 \neq k6\_numbers) \Rightarrow (k5\_arytm\_0 X0 X1 = k5\_funct\_4 k1\_numbers k6\_numbers \\ np\_1 X0 X1)))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Leftrightarrow (X0 \in k2\_numbers) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow ( \\ k3\_xcmplx\_0 X0 X1 = k3\_xcmplx\_0 X1 X0) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (m1\_subset\_1 \\ X1 k1\_numbers)) \Rightarrow (k1\_arytm\_0 X0 X1 = k1\_arytm\_0 X1 X0) \quad (20)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xcmplx\_0 X0) \quad (21)$$

**Theorem 1**  $\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 np\_1 X0 = X0)$ .