

## t30\_asympt\_0

(TMbFwMEY48JZvP71txPY6SeJqKCpgqDtLbw)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v2\_asympt\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_asympt\_0 : \iota \Rightarrow \iota$  be given. Let  $k7\_asympt\_0 : \iota \Rightarrow \iota$  be given. Let  $k6\_asympt\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & ((v2\_asympt\_0 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers k1\_numbers)))))) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge ( \\ & (v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge ((v2\_asympt\_0 X1) \wedge (m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow (\forall X2. \\ & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers k1\_numbers) \wedge ((v2\_asympt\_0 \\ & X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & (((X0 \in k7\_asympt\_0 X1) \wedge (X1 \in k7\_asympt\_0 X2)) \Rightarrow (X0 \in k7\_asympt\_0 \\ & X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & ((v2\_asympt\_0 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers k1\_numbers)))))) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge ( \\ & (v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge ((v2\_asympt\_0 X1) \wedge (m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow (\forall X2. \\ & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers k1\_numbers) \wedge ((v2\_asympt\_0 \\ & X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & (((X0 \in k6\_asympt\_0 X1) \wedge (X1 \in k6\_asympt\_0 X2)) \Rightarrow (X0 \in k6\_asympt\_0 \\ & X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k3\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 \ k5\_numbers \ k1\_numbers) \wedge \\ & ((v2\_asympt\_0 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers \ k1\_numbers)))))) \Rightarrow (k8\_asympt\_0 X0 = k3\_xboole\_0 (k6\_asympt\_0 \\ & X0) (k7\_asympt\_0 X0)) \end{aligned} \tag{4}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 \ k5\_numbers \ k1\_numbers) \wedge \\ & ((v2\_asympt\_0 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers \ k1\_numbers)))))) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge ( \\ & (v1\_funct\_2 X1 \ k5\_numbers \ k1\_numbers) \wedge ((v2\_asympt\_0 X1) \wedge (m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \ k5\_numbers \ k1\_numbers)))))) \Rightarrow (\forall X2. \\ & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 \ k5\_numbers \ k1\_numbers) \wedge ((v2\_asympt\_0 \\ & X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \ k5\_numbers \ k1\_numbers)))))) \Rightarrow \\ & (((X0 \in k8\_asympt\_0 X1) \wedge (X1 \in k8\_asympt\_0 X2)) \Rightarrow (X0 \in k8\_asympt\_0 \\ & X2)))) \end{aligned}$$