

t22\_bvfunc14 (TM-  
NoZTJM8PuZHum4v9oGv1b41mXtnA2mAqJ)

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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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_bvfunc\_2 : \iota \Rightarrow \iota$  be given. Let  $m1\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_bvfunc\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_partit1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.k3\_enumset1 \\ X0\ X1\ X2\ X3\ X4 = k2\_xboole\_0\ (k2\_tarski\ X0\ X1)\ (k1\_enumset1\ X2\ X3\ X4) \quad (1)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ (k1\_bvfunc\_2\ X0))) \Rightarrow (\forall X2.(m1\_eqrel\_1\ X2\ X0) \Rightarrow (\forall X3. \\ (m1\_eqrel\_1\ X3\ X0) \Rightarrow (\forall X4.(m1\_eqrel\_1\ X4\ X0) \Rightarrow (\forall X5. \\ (m1\_eqrel\_1\ X5\ X0) \Rightarrow (\forall X6.(m1\_eqrel\_1\ X6\ X0) \Rightarrow ((X1 = k3\_enumset1 \\ X2\ X3\ X4\ X5\ X6) \Rightarrow ((X2 = X3) \vee ((X2 = X4) \vee ((X2 = X5) \vee ((X2 = X6) \vee (k5\_bvfunc\_2 \\ X0\ X2\ X1 = k2\_partit1\ X0\ (k2\_partit1\ X0\ (k2\_partit1\ X0\ X3\ X4)\ X5)\ X6)))))))))))))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarski\ X0\ X1 = k2\_tarski\ X1\ X0 \quad (3)$$

**Theorem 1**

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ (k1\_bvfunc\_2\ X0))) \Rightarrow (\forall X2.(m1\_eqrel\_1\ X2\ X0) \Rightarrow (\forall X3. \\ (m1\_eqrel\_1\ X3\ X0) \Rightarrow (\forall X4.(m1\_eqrel\_1\ X4\ X0) \Rightarrow (\forall X5. \\ (m1\_eqrel\_1\ X5\ X0) \Rightarrow (\forall X6.(m1\_eqrel\_1\ X6\ X0) \Rightarrow ((X1 = k3\_enumset1 \\ X2\ X3\ X4\ X5\ X6) \Rightarrow ((X2 = X3) \vee ((X3 = X4) \vee ((X3 = X5) \vee ((X3 = X6) \vee (k5\_bvfunc\_2 \\ X0\ X3\ X1 = k2\_partit1\ X0\ (k2\_partit1\ X0\ (k2\_partit1\ X0\ X2\ X4)\ X5)\ X6)))))))))))))) \quad (4)$$