

# t82\_bvfunc11 (TMJAbn- HgPT6rhUotcY2EJmLkRVxniNbXkpg)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_margrel1 : \iota$  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  $k1\_bvfunc\_2 : \iota \Rightarrow \iota$  be given. Let  $m1\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_bvfunc\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_bvfunc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_bvfunc\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_bvfunc\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_bvfunc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge ( \\ & (v1\_funct\_2 X1 X0 k6\_margrel1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 ( \\ & k2\_zfmisc\_1 X0 k6\_margrel1)))))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\ & (k1\_zfmisc\_1 (k1\_bvfunc\_2 X0))) \Rightarrow (\forall X3. (m1\_eqrel\_1 X3 X0) \Rightarrow \\ & (\forall X4. (m1\_eqrel\_1 X4 X0) \Rightarrow ((v2\_bvfunc\_2 X2 X0) \Rightarrow (r1\_bvfunc\_1 \\ & X0 (k7\_bvfunc\_2 X0 (k6\_bvfunc\_2 X0 X1 X2 X3) X2 X4) (k7\_bvfunc\_2 X0 \\ & (k1\_bvfunc\_1 X0 X1 X2 X4) X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((v1\_funct\_1 X1) \wedge ( \\ & (v1\_funct\_2 X1 X0 k6\_margrel1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 ( \\ & k2\_zfmisc\_1 X0 k6\_margrel1)))))) \Rightarrow ((v1\_funct\_1 (k1\_bvfunc\_1 \\ & X0 X1)) \wedge ((v1\_funct\_2 (k1\_bvfunc\_1 X0 X1) X0 k6\_margrel1) \wedge (m1\_subset\_1 \\ & (k1\_bvfunc\_1 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k6\_margrel1)))))) \end{aligned} \tag{2}$$

## Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge ( \\ & (v1\_funct\_2 X1 X0 k6\_margrel1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 ( \\ & k2\_zfmisc\_1 X0 k6\_margrel1)))))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\ & (k1\_zfmisc\_1 (k1\_bvfunc\_2 X0))) \Rightarrow (\forall X3. (m1\_eqrel\_1 X3 X0) \Rightarrow \\ & (\forall X4. (m1\_eqrel\_1 X4 X0) \Rightarrow ((v2\_bvfunc\_2 X2 X0) \Rightarrow (r1\_bvfunc\_1 \\ & X0 (k7\_bvfunc\_2 X0 (k6\_bvfunc\_2 X0 (k1\_bvfunc\_1 X0 X1) X2 X3) X2 X4) \\ & (k7\_bvfunc\_2 X0 (k7\_bvfunc\_2 X0 (k1\_bvfunc\_1 X0 X1) X2 X4) X2 X3)))))) \end{aligned}$$