

t25\_bvfunc\_5 (TM-  
LevGF68GxHnyYLCeRGDKu7ZZnDzuYkAss)

October 27, 2020

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  $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_bvfunc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_bvfunc\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge \\ (v1\_funct\_2 X1 X0 k6\_margrel1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 ( \\ k2\_zfmisc\_1 X0 k6\_margrel1)))))) \Rightarrow ((r2\_funct\_2 X0 k6\_margrel1 \\ (k9\_bvfunc\_1 X0 (k12\_bvfunc\_1 X0) X1) (k12\_bvfunc\_1 X0)) \Rightarrow (r2\_funct\_2 \\ X0 k6\_margrel1 X1 (k12\_bvfunc\_1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0) \wedge ((v1\_funct\_1 \\ X1) \wedge ((v1\_funct\_2 X1 X0 k6\_margrel1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 X0 k6\_margrel1)))))) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ X2 X0 k6\_margrel1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ X0 k6\_margrel1)))))) \Rightarrow ((v1\_funct\_1 (k9\_bvfunc\_1 X0 X1 X2)) \wedge \\ (v1\_funct\_2 (k9\_bvfunc\_1 X0 X1 X2) X0 k6\_margrel1) \wedge (m1\_subset\_1 \\ (k9\_bvfunc\_1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k6\_margrel1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow ((v1\_funct\_1 (k12\_bvfunc\_1 X0)) \wedge \\ ((v1\_funct\_2 (k12\_bvfunc\_1 X0) X0 k6\_margrel1) \wedge (m1\_subset\_1 \\ (k12\_bvfunc\_1 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k6\_margrel1)))) \end{aligned} \quad (3)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge \\ (v1\_funct\_2 X1 X0 k6\_margrel1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 ( \\ k2\_zfmisc\_1 X0 k6\_margrel1)))))) \Rightarrow ((r2\_funct\_2 X0 k6\_margrel1 \\ (k9\_bvfunc\_1 X0 (k12\_bvfunc\_1 X0) (k9\_bvfunc\_1 X0 (k12\_bvfunc\_1 \\ X0) X1)) (k12\_bvfunc\_1 X0)) \Rightarrow (r2\_funct\_2 X0 k6\_margrel1 X1 (k12\_bvfunc\_1 \\ X0))) \end{aligned}$$