

## t44\_bvfunc14

(TMF2wg11MyAdVgMuEuRnEEEvTsxKcnAgfax)

October 27, 2020

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  $k5\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_bvfunc\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_partit1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k2\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
 & \quad (k1\_bvfunc\_2 X0))) \Rightarrow (\forall X2. (m1\_eqrel\_1 X2 X0) \Rightarrow (\forall X3. \\
 & \quad (m1\_eqrel\_1 X3 X0) \Rightarrow (\forall X4. (m1\_eqrel\_1 X4 X0) \Rightarrow (\forall X5. \\
 & \quad (m1\_eqrel\_1 X5 X0) \Rightarrow (\forall X6. (m1\_eqrel\_1 X6 X0) \Rightarrow (\forall X7. \\
 & \quad (m1\_eqrel\_1 X7 X0) \Rightarrow (\forall X8. (m1\_eqrel\_1 X8 X0) \Rightarrow ((X1 = k5\_enumset1 \\
 & \quad X2 X3 X4 X5 X6 X7 X8) \Rightarrow ((X2 = X3) \vee ((X2 = X4) \vee ((X2 = X5) \vee ((X2 = X6) \vee ((X2 = \\
 & \quad X7) \vee ((X2 = X8) \vee ((X3 = X4) \vee ((X3 = X5) \vee ((X3 = X6) \vee ((X3 = X7) \vee ((X3 = X8) \vee \\
 & \quad ((X4 = X5) \vee ((X4 = X6) \vee ((X4 = X7) \vee ((X4 = X8) \vee ((X5 = X6) \vee ((X5 = X7) \vee ( \\
 & \quad (X5 = X8) \vee ((X6 = X7) \vee ((X6 = X8) \vee ((X7 = X8) \vee (k5\_bvfunc\_2 X0 X2 X1 = k2\_partit1 \\
 & \quad X0 (k2\_partit1 X0 (k2\_partit1 X0 (k2\_partit1 X0 (k2\_partit1 X0 X3 \\
 & \quad X4) X5) X6) X7) X8))))))))))))))))))))))))))))))))) \\
 & \hspace{15em} (1)
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. k1\_enumset1 X0 X1 X2 = k2\_xboole\_0 \\
 & \quad (k2\_tarski X0 X1) (k1\_tarski X2) \\
 & \hspace{15em} (2)
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. k1\_enumset1 X0 X1 X2 = k2\_xboole\_0 \\
 & \quad (k1\_tarski X0) (k2\_tarski X1 X2) \\
 & \hspace{15em} (3)
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\
 & \quad \forall X6. k5\_enumset1 X0 X1 X2 X3 X4 X5 X6 = k2\_xboole\_0 (k1\_enumset1 \\
 & \quad X0 X1 X2) (k2\_enumset1 X3 X4 X5 X6) \\
 & \hspace{15em} (4)
 \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (5)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ &\quad (k1\_bvf\_func\_2 X0))) \Rightarrow (\forall X2.(m1\_eqrel\_1 X2 X0) \Rightarrow (\forall X3. \\ &\quad (m1\_eqrel\_1 X3 X0) \Rightarrow (\forall X4.(m1\_eqrel\_1 X4 X0) \Rightarrow (\forall X5. \\ &\quad (m1\_eqrel\_1 X5 X0) \Rightarrow (\forall X6.(m1\_eqrel\_1 X6 X0) \Rightarrow (\forall X7. \\ &\quad (m1\_eqrel\_1 X7 X0) \Rightarrow (\forall X8.(m1\_eqrel\_1 X8 X0) \Rightarrow ((X1 = k5\_enumset1 \\ &X2 X3 X4 X5 X6 X7 X8) \Rightarrow ((X2 = X3) \vee ((X2 = X4) \vee ((X2 = X5) \vee ((X2 = X6) \vee ((X2 = \\ &X7) \vee ((X2 = X8) \vee ((X3 = X4) \vee ((X3 = X5) \vee ((X3 = X6) \vee ((X3 = X7) \vee ((X3 = X8) \vee \\ &\quad ((X4 = X5) \vee ((X4 = X6) \vee ((X4 = X7) \vee ((X4 = X8) \vee ((X5 = X6) \vee ((X5 = X7) \vee ( \\ &(X5 = X8) \vee ((X6 = X7) \vee ((X6 = X8) \vee ((X7 = X8) \vee (k5\_bvf\_func\_2 X0 X4 X1 = k2\_partit1 \\ &\quad X0 (k2\_partit1 X0 (k2\_partit1 X0 (k2\_partit1 X0 (k2\_partit1 X0 X2 \\ &\quad X3) X5) X6) X7) X8)) \end{aligned}$$