

## t82\_valued\_2

(TMYtn86qKJ7THnKRTwP7R2gpkQYGe3etWUT)

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Let  $v1\_valued\_2 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  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  $k79\_valued\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_valued\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_valued\_2 : \iota \Rightarrow \iota$  be given. Let  $k73\_valued\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. (v1\_valued\_2 X3) \Rightarrow \\
 & (\forall X4. (v1\_valued\_2 X4) \Rightarrow (\forall X5. (v1\_valued\_2 X5) \Rightarrow ( \\
 & \forall X6. ((v1\_funct\_1 X6) \wedge (m1\_subset\_1 X6 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & X0 X3)))) \Rightarrow (\forall X7. ((v1\_funct\_1 X7) \wedge (m1\_subset\_1 X7 (k1\_zfmisc\_1 \\
 & (k2\_zfmisc\_1 X1 X4)))) \Rightarrow (\forall X8. ((v1\_funct\_1 X8) \wedge (m1\_subset\_1 \\
 & X8 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X2 X5)))) \Rightarrow (k79\_valued\_2 (k3\_xboole\_0 \\
 & X0 X1) X2 (k2\_valued\_2 (k3\_xboole\_0 (k1\_valued\_2 X3) (k1\_valued\_2 \\
 & X4))) X5 (k79\_valued\_2 X0 X1 X3 X4 X6 X7) X8 = k79\_valued\_2 X0 (k3\_xboole\_0 \\
 & X1 X2) X3 (k2\_valued\_2 (k3\_xboole\_0 (k1\_valued\_2 X4) (k1\_valued\_2 \\
 & X5))) X6 (k73\_valued\_2 X1 X2 X4 X5 X7 X8))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (v1\_valued\_2 X2) \Rightarrow (\forall X3. \\
 & (v1\_valued\_2 X3) \Rightarrow (\forall X4. ((v1\_funct\_1 X4) \wedge (m1\_subset\_1 \\
 & X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X2)))) \Rightarrow (\forall X5. ((v1\_funct\_1 \\
 & X5) \wedge (m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X3)))) \Rightarrow (k73\_valued\_2 \\
 & X0 X1 X2 X3 X4 X5 = k73\_valued\_2 X1 X0 X3 X2 X5 X4)))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. k3\_xboole\_0 X0 X1 = k3\_xboole\_0 X1 X0 \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (v1\_valued\_2 X3) \Rightarrow \\ & (\forall X4. (v1\_valued\_2 X4) \Rightarrow (\forall X5. (v1\_valued\_2 X5) \Rightarrow ( \\ & \forall X6. ((v1\_funct\_1 X6) \wedge (m1\_subset\_1 X6 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X3)))) \Rightarrow (\forall X7. ((v1\_funct\_1 X7) \wedge (m1\_subset\_1 X7 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X1 X4)))) \Rightarrow (\forall X8. ((v1\_funct\_1 X8) \wedge (m1\_subset\_1 \\ & X8 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X2 X5)))) \Rightarrow (k79\_valued\_2 (k3\_xboole\_0 \\ & X0 X1) X2 (k2\_valued\_2 (k3\_xboole\_0 (k1\_valued\_2 X3) (k1\_valued\_2 \\ & X4))) X5 (k79\_valued\_2 X0 X1 X3 X4 X6 X7) X8 = k79\_valued\_2 (k3\_xboole\_0 \\ & X0 X2) X1 (k2\_valued\_2 (k3\_xboole\_0 (k1\_valued\_2 X3) (k1\_valued\_2 \\ & X5))) X4 (k79\_valued\_2 X0 X2 X3 X5 X6 X8) X7)))))) \end{aligned}$$