

# t9\_measure4

## (TMYZj1ixxWp4Ux9UoCRgZ9ZKAPghQFKYLxM)

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Let  $m1\_measure4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_measure4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1\_measure4\ X3\ X0) \Rightarrow \\ & (((X1 \in k1\_measure4\ X0\ X3) \wedge (X2 \in k1\_measure4\ X0\ X3)) \Rightarrow (k2\_xboole\_0 \\ & \quad X1\ X2 \in k1\_measure4\ X0\ X3)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_measure4\ X2\ X1) \Rightarrow ((X0 \in k1\_measure4 \\ & \quad X1\ X2) \Rightarrow (k6\_subset\_1\ X1\ X0 \in k1\_measure4\ X1\ X2)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. k4\_xboole\_0\ X0\ (k3\_xboole\_0 \\ & \quad X1\ X2) = k2\_xboole\_0\ (k4\_xboole\_0\ X0\ X1)\ (k4\_xboole\_0\ X0\ X2) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ & \quad X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. k4\_xboole\_0\ X0\ (k4\_xboole\_0\ X0\ X1) = k3\_xboole\_0 \\ & \quad X0\ X1 \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski \\ & \quad X0\ X1) \end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.k4\_xboole\_0 X0 k1\_xboole\_0 = X0 \quad (7)$$

Assume the following.

$$\forall X0.k3\_xboole\_0 X0 k1\_xboole\_0 = k1\_xboole\_0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1) \Rightarrow (k3\_xboole\_0 X0 X1 = X0) \quad (9)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.\forall X3.((r1\_tarski X0 X1) \wedge \\ &(r1\_tarski X2 X3)) \Rightarrow (r1\_tarski (k3\_xboole\_0 X0 X2) (k3\_xboole\_0 \\ &X1 X3)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.k2\_xboole\_0 X0 k1\_xboole\_0 = X0 \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski X0 X0 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.k6\_subset\_1 X0 X1 = k4\_xboole\_0 X0 X1 \quad (13)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.(m1\_measure4 X1 X0) \Rightarrow ((\neg v1\_xboole\_0 (k1\_measure4 \\ &X0 X1)) \wedge (m1\_subset\_1 (k1\_measure4 X0 X1) (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ &X0)))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.k3\_xboole\_0 X0 X1 = k3\_xboole\_0 X1 X0 \quad (15)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.\forall X3.(m1\_measure4 X3 X0) \Rightarrow \\ &(((X1 \in k1\_measure4 X0 X3) \wedge (X2 \in k1\_measure4 X0 X3)) \Rightarrow (k3\_xboole\_0 \\ &X1 X2 \in k1\_measure4 X0 X3)) \end{aligned}$$