t4_bvfunc11 (TMMzphoe4kLA2bQLAvp9sNX3twMFfUryi8j)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15\_bvfunc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_partit1 : \iota \Rightarrow \iota$ be given. Let $k10\_eqrel\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_eqrel\_1\ X1\ X0) \Rightarrow ((r1\_setfam\_1\ X1\ (k6\_partit1\ X0)) \wedge (r1\_setfam\_1\ (k10\_eqrel\_1\ X0)\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (\forall X2.(m1\_eqrel\_1\ X2\ X0) \Rightarrow (\forall X3.(m1\_eqrel\_1\ X3\ X0) \Rightarrow ((r1\_setfam\_1\ X2\ X3) \Rightarrow (r1\_tarski\ (k15\_bvfunc\_1\ X0\ X1\ X2)\ (k15\_bvfunc\_1\ X0\ X1\ X3))))))) \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (m1\_eqrel\_1\ (k6\_partit1\ X0)\ X0) \tag{3}$$

Assume the following.

$$\forall X0.m1\_eqrel\_1\ (k10\_eqrel\_1\ X0)\ X0 \tag{4}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (\forall X2.(m1\_eqrel\_1\ X2\ X0) \Rightarrow ((r1\_tarski\ (k15\_bvfunc\_1\ X0\ X1\ X2)\ (k15\_bvfunc\_1\ X0\ X1\ (k6\_partit1\ X0))) \wedge (r1\_tarski\ (k15\_bvfunc\_1\ X0\ X1\ (k10\_eqrel\_1\ X0))\ (k15\_bvfunc\_1\ X0\ X1\ X2))))))$$