

# l88\_integra8 (TMNHoVcCuVLR- FrvvgZM5PM9iRS1Zy8GAVwoe)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_measure5 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_integra5 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k16\_sin\_cos : \iota$  be given. Let  $v1\_comseq\_2 : \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_sin\_cos : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_fcont\_1 : \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (1)$$

Assume the following.

$$(k1\_relset\_1 k1\_numbers k16\_sin\_cos = k1\_numbers) \wedge (k1\_relset\_1 k1\_numbers k19\_sin\_cos = k1\_numbers) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1\_xboole\_0 X0) \wedge ((v2\_measure5 X0) \wedge (m1\_subset\_1 \\ & \quad X0 (k1\_zfmisc\_1 k1\_numbers)))) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow \\ & (((r1\_tarski X0 (k1\_relset\_1 k1\_numbers X1)) \wedge (v1\_fcont\_1 (k2\_partfun1 \\ & \quad k1\_numbers k1\_numbers X1 X0))) \Rightarrow (r1\_integra5 X0 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1\_xboole\_0 X0) \wedge ((v2\_measure5 X0) \wedge (m1\_subset\_1 \\ & \quad X0 (k1\_zfmisc\_1 k1\_numbers)))) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow \\ & (((r1\_tarski X0 (k1\_relset\_1 k1\_numbers X1)) \wedge (v1\_fcont\_1 (k2\_partfun1 \\ & \quad k1\_numbers k1\_numbers X1 X0))) \Rightarrow (v1\_comseq\_2 (k2\_partfun1 k1\_numbers \\ & \quad k1\_numbers X1 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_funct\_1 X2) \wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \Rightarrow (k2\_partfun1 \\ & X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & (v1\_funct\_1 k16\_sin\_cos) \wedge ((v1\_funct\_2 k16\_sin\_cos k1\_numbers \\ & k1\_numbers) \wedge (v1\_fcont\_1 k16\_sin\_cos)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_funct\_1 X0) \wedge ((v1\_fcont\_1 X0) \wedge (m1\_subset\_1 \\ & X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))))) \Rightarrow ((v1\_funct\_1 \\ & (k5\_relat\_1 X0 X1)) \wedge (v1\_fcont\_1 (k5\_relat\_1 X0 X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & (v1\_funct\_1 k16\_sin\_cos) \wedge ((v1\_funct\_2 k16\_sin\_cos k1\_numbers \\ & k1\_numbers) \wedge (m1\_subset\_1 k16\_sin\_cos (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k1\_numbers k1\_numbers)))) \end{aligned} \quad (8)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v1\_xboole\_0 X0) \wedge ((v2\_measure5 X0) \wedge (m1\_subset\_1 \\ & X0 (k1\_zfmisc\_1 k1\_numbers)))) \Rightarrow ((r1\_integra5 X0 k16\_sin\_cos) \wedge \\ & (v1\_comseq\_2 (k2\_partfun1 k1\_numbers k1\_numbers k16\_sin\_cos \\ & X0))) \end{aligned}$$