

t18\_integra8  
(TMWr9iUESF9dvqjgXwhof4wBDW3RQUkzJNi)

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Let  $k3\_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k4\_sin\_cos2 : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $m1\_subset.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole.0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xreal.0 : \iota \Rightarrow o$  be given. Let  $k1\_seq.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal.0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole.0 : \iota \Rightarrow o$  be given. Let  $v1\_funct.1 : \iota \Rightarrow o$  be given. Let  $v1\_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc.1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat.1 : \iota \Rightarrow o$  be given. Let  $v3\_valued.0 : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx.0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal.0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal.0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v5\_relat.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset.1 X0 X1) \quad (1)$$

Assume the following.

$$m1\_subset.1 k1\_xboole.0 k4\_ordinal1 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (v1\_xreal.0 X0) \Rightarrow & ((k1\_seq.1 k4\_sin\_cos2 X0 \neq k6\_numbers) \wedge \\ ((\neg r1\_xxreal.0 (k1\_seq.1 k4\_sin\_cos2 X0) k6\_numbers) \wedge & (k1\_seq.1 \\ k4\_sin\_cos2 k6\_numbers = np\_1))) & \end{aligned} \quad (3)$$

Assume the following.

$$k6\_numbers = k1\_xboole.0 \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole.0 X0) \wedge \\ (((v1\_funct.1 X2) \wedge ((v1\_funct.2 X2 X0 X1) \wedge (m1\_subset.1 X2 (k1\_zfmisc.1 \\ (k2\_zfmisc.1 X0 X1)))))) \wedge (m1\_subset.1 X3 X0))) \Rightarrow & (k3\_funct.2 X0 \\ X1 X2 X3 = k1\_funct.1 X2 X3) & \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v3\_valued\_0 X0)))\Rightarrow(k1\_seq\_1 X0 X1 = k1\_funct\_1 X0 X1) \quad (6)$$

Assume the following.

$$\exists X0.(m1\_subset\_1 X0 k1\_numbers)\wedge((v1\_xcmplx\_0 X0)\wedge((v1\_xreal\_0 X0)\wedge((v2\_xreal\_0 X0)\wedge(v1\_xreal\_0 X0)))) \quad (7)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (8)$$

Assume the following.

$$(v1\_funct\_1 k4\_sin\_cos2)\wedge((v1\_funct\_2 k4\_sin\_cos2 k1\_numbers k1\_numbers)\wedge(m1\_subset\_1 k4\_sin\_cos2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Leftrightarrow(X0 \in k1\_numbers) \quad (10)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (11)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge(v5\_relat\_1 X0 k1\_numbers))\Rightarrow((v1\_relat\_1 X0)\wedge(v3\_valued\_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(v1\_xreal\_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (15)$$

**Theorem 1**  $k3\_funct\_2 k1\_numbers k1\_numbers k4\_sin\_cos2 k6\_numbers = np\_1$ .