

# t23\_integra9 (TMKSfRMiTZuZDfncySxxryKRn- TQuuGzxTg6)

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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  $k1\_numbers : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k20\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k18\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_valued\_0 X0))) \Rightarrow \\ & \quad (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_valued\_0 \\ & \quad X1)))) \Rightarrow (\forall X2.((v1\_relat\_1 X2) \wedge ((v1\_funct\_1 X2) \wedge (v1\_valued\_0 \\ & \quad X2))) \Rightarrow (k18\_valued\_1 (k18\_valued\_1 X0 X1) X2 = k18\_valued\_1 X0 ( \\ & \quad k18\_valued\_1 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & \quad k1\_numbers k1\_numbers)))) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge (m1\_subset\_1 \\ & \quad X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow (\forall X2. \\ & \quad ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 k1\_numbers))) \Rightarrow \\ & \quad (r2\_relset\_1 X2 k1\_numbers (k20\_valued\_1 X2 k1\_numbers k1\_numbers \\ & \quad (k1\_integra5 X0 X2) (k1\_integra5 X1 X2)) (k1\_integra5 (k20\_valued\_1 \\ & \quad k1\_numbers k1\_numbers k1\_numbers X0 X1) X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1\_subset\_1 X2 \\ & \quad (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & \quad (k2\_zfmisc\_1 X0 X1)))) \Rightarrow ((r2\_relset\_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3\_membered \\ & X1)\wedge((v3\_membered X2)\wedge(((v1\_funct\_1 X3)\wedge(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))))\wedge((v1\_funct\_1 X4)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X2))))))\Rightarrow(k20\_valued\_1 X0 X1 X2 X3 X4 = k18\_valued\_1 \\ & X3 X4) \end{aligned} \tag{4}$$

Assume the following.

$$v3\_membered k1\_numbers \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_valued\_0 \\ & X0)))\wedge((v1\_relat\_1 X1)\wedge((v1\_funct\_1 X1)\wedge(v1\_valued\_0 X1))))\Rightarrow \\ & ((v1\_relat\_1 (k18\_valued\_1 X0 X1))\wedge((v1\_funct\_1 (k18\_valued\_1 \\ & X0 X1))\wedge(v1\_valued\_0 (k18\_valued\_1 X0 X1)))) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3\_membered \\ & X1)\wedge((v3\_membered X2)\wedge(((v1\_funct\_1 X3)\wedge(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))))\wedge((v1\_funct\_1 X4)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X2))))))\Rightarrow((v1\_funct\_1 (k20\_valued\_1 X0 X1 X2 \\ & X3 X4))\wedge(m1\_subset\_1 (k20\_valued\_1 X0 X1 X2 X3 X4) (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 k1\_numbers)))) \end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1\_funct\_1 X0)\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 k1\_numbers k1\_numbers))))\wedge((\neg v1\_xboole\_0 X1)\wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 k1\_numbers))))\Rightarrow((v1\_funct\_1 (k1\_integra5 \\ & X0 X1))\wedge(m1\_subset\_1 (k1\_integra5 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X1 k1\_numbers)))) \end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.(v3\_membered X0)\Rightarrow(v1\_membered X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))\Rightarrow(v1\_relat\_1 X2)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_membered X1)\Rightarrow(\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))\Rightarrow(v1\_valued\_0 X2)) \tag{11}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & \quad k1\_numbers k1\_numbers)))) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge (m1\_subset\_1 \\ & \quad X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow (\forall X2. \\ & ((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers \\ & \quad k1\_numbers)))) \Rightarrow (\forall X3.((\neg v1\_xboole\_0 X3) \wedge (m1\_subset\_1 \\ & X3 (k1\_zfmisc\_1 k1\_numbers))) \Rightarrow (r2\_relset\_1 X3 k1\_numbers (k20\_valued\_1 \\ & \quad X3 k1\_numbers k1\_numbers (k1\_integra5 (k20\_valued\_1 k1\_numbers \\ & \quad k1\_numbers k1\_numbers X0 X1) X3) (k1\_integra5 X2 X3)) (k20\_valued\_1 \\ & X3 k1\_numbers k1\_numbers (k1\_integra5 X0 X3) (k1\_integra5 (k20\_valued\_1 \\ & \quad k1\_numbers k1\_numbers k1\_numbers X1 X2) X3)))))) \end{aligned}$$