# t27_integra7 (TMG8Fe1kBHA2iF6NapUuXcDh8io2tSYz3YT)

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Let $r1\_integra7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k24\_sin\_cos : \iota$ be given. Let $v3\_rcomp\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $r2\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_subset\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k6\_numbers : \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_limfunc1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v3\_rcomp\_1\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))) \Rightarrow ((k2\_fdiff\_1\ k24\_sin\_cos\ X0 = k2\_partfun1\ k1\_numbers\ k1\_numbers\ k24\_sin\_cos\ X0) \wedge (k9\_xtuple\_0\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k24\_sin\_cos\ X0) = X0)) \tag{1}$$

Assume the following.

$$k2\_fdiff\_1\ k24\_sin\_cos\ k1\_numbers = k24\_sin\_cos \tag{2}$$

Assume the following.

$$(v2\_funct\_1\ k24\_sin\_cos) \wedge ((r2\_fdiff\_1\ k24\_sin\_cos\ k1\_numbers) \wedge ((r2\_fdiff\_1\ k24\_sin\_cos\ (k2\_subset\_1\ k1\_numbers)) \wedge ((\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (k1\_fdiff\_1\ k24\_sin\_cos\ X0 = k1\_seq\_1\ k24\_sin\_cos\ X0)) \wedge ((\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (\neg r1\_xxreal\_0\ (k1\_fdiff\_1\ k24\_sin\_cos\ X0)\ k6\_numbers)) \wedge ((k1\_relset\_1\ k1\_numbers\ k24\_sin\_cos = k2\_subset\_1\ k1\_numbers) \wedge ((k1\_relset\_1\ k1\_numbers\ k24\_sin\_cos = k2\_subset\_1\ k1\_numbers) \wedge (k2\_relset\_1\ k1\_numbers\ k24\_sin\_cos = k3\_limfunc1\ k6\_numbers)))))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow((r2\_relset\_1\ X0\ X1\ X2\ X3)\Leftrightarrow(X2 = X3)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow((r1\_integra7\ X0\ X1\ X2)\Leftrightarrow((r2\_fdiff\_1\ X1\ X0)\wedge(r2\_relset\_1\ k1\_numbers\ k1\_numbers\ (k2\_fdiff\_1\ X1\ X0)\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ X2\ X0))))) \tag{5}$$

Assume the following.

$$v3\_rcomp\_1\ (k2\_subset\_1\ k1\_numbers) \tag{6}$$

Assume the following.

$$(v1\_funct\_1\ k24\_sin\_cos)\wedge((v2\_funct\_1\ k24\_sin\_cos)\wedge(v1\_funct\_2\ k24\_sin\_cos\ k1\_numbers\ k1\_numbers)) \tag{7}$$

Assume the following.

$$\forall X0.m1\_subset\_1\ (k2\_subset\_1\ X0)\ (k1\_zfmisc\_1\ X0) \tag{8}$$

Assume the following.

$$(v1\_funct\_1\ k24\_sin\_cos)\wedge((v1\_funct\_2\ k24\_sin\_cos\ k1\_numbers\ k1\_numbers)\wedge(m1\_subset\_1\ k24\_sin\_cos\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \tag{9}$$

Assume the following.

$$\forall X0.k2\_subset\_1\ X0 = X0 \tag{10}$$

**Theorem 1** $r1\_integra7\ k1\_numbers\ k24\_sin\_cos\ k24\_sin\_cos.$