t19_integra7 (TMayZ335uSUnj7pgbEFuVtGtmRW9LrPKqPM)

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Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. 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 $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_fcont\_1 : \iota \Rightarrow o$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_integra5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_comseq\_2 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v2\_measure5 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X1\ X2)) \Rightarrow (r1\_tarski\ X0\ X2) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_funct\_1\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \Rightarrow (((v1\_fcont\_1\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ X2\ X0)) \wedge (r1\_tarski\ X1\ X0)) \Rightarrow (v1\_fcont\_1\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ X2\ X1))) \tag{2}$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow((\neg v1\_xboole\_0\ (k3\_integra5\ X0\ X1))\wedge((v2\_measure5\ (k3\_integra5\ X0\ X1))\wedge(m1\_subset\_1\ (k3\_integra5\ X0\ X1)\ (k1\_zfmisc\_1\ k1\_numbers)))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(m1\_subset\_1\ (k1\_rcomp\_1\ X0\ X1)\ (k1\_zfmisc\_1\ k1\_numbers)) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow((r1\_xxreal\_0\ X0\ X1)\Rightarrow(k3\_integra5\ X0\ X1 = k1\_rcomp\_1\ X0\ X1))) \tag{7}$$

Theorem 1

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(\forall X2.\forall X3.((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow(((r1\_xxreal\_0\ X0\ X1)\wedge((r1\_tarski\ (k1\_rcomp\_1\ X0\ X1)\ X2)\wedge((r1\_tarski\ X2\ (k1\_relset\_1\ k1\_numbers\ X3))\wedge(v1\_fcont\_1\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ X3\ X2)))))\Rightarrow((v1\_fcont\_1\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ X3\ (k3\_integra5\ X0\ X1)))\wedge((r1\_integra5\ (k3\_integra5\ X0\ X1)\ X3)\wedge(v1\_comseq\_2\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ X3\ (k3\_integra5\ X0\ X1))))))))$$