t69_jgraph_5 (TMd2rVEbv4vcRY78tTYvnedHDcrQrAcQs2n)

October 27, 2020

Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k15\_euclid : \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v2\_compts\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k12\_euclid : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $r1\_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_topmetr : \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let

$r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \Rightarrow (\forall X4.((\neg v1\_xboole\_0\ X4) \wedge ((v2\_compts\_1\ X4\ (k15\_euclid\ np\_\_2)) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))) \Rightarrow (((X4 = ReplSep\ (toset\ (\lambda X6 : \iota.m1\_subset\_1\ X6\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))\ (\lambda X6 : \iota.k12\_euclid\ X6 = np\_\_1)\ (\lambda X6 : \iota.X6)) \wedge ((r1\_jordan6\ X4\ X0\ X1) \wedge ((r1\_jordan6\ X4\ X1\ X2) \wedge (r1\_jordan6\ X4\ X2\ X3)))) \Rightarrow (\forall X6.((v1\_funct\_1\ X6) \wedge ((v1\_funct\_2\ X6\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \wedge (m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))) \Rightarrow (\forall X7.((v1\_funct\_1\ X7) \wedge ((v1\_funct\_2\ X7\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \wedge (m1\_subset\_1\ X7\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))) \Rightarrow (\neg(v5\_pre\_topc\ X6\ k5\_topmetr\ (k15\_euclid\ np\_\_2)) \wedge ((v2\_funct\_1\ X6) \wedge ((v5\_pre\_topc\ X7\ k5\_topmetr\ (k15\_euclid\ np\_\_2)) \wedge ((v2\_funct\_1\ X7) \wedge ((X5 = ReplSep\ (toset\ (\lambda X8 : \iota.m1\_subset\_1\ X8\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))\ (\lambda X8 : \iota.r1\_xxreal\_0\ (k12\_euclid\ X8)\ np\_\_1)\ (\lambda X8 : \iota.X8)) \wedge ((k1\_funct\_1\ X6\ k6\_numbers = X0) \wedge ((k1\_funct\_1\ X6\ np\_\_1 = X2) \wedge ((k1\_funct\_1\ X7\ k6\_numbers = X1) \wedge ((k1\_funct\_1\ X7\ np\_\_1 = X3) \wedge ((r1\_tarski\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X6)\ X5) \wedge ((r1\_tarski\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X7)\ X5) \wedge (r1\_xboole\_0\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X6)\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X7)))))))))))))))))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0) \wedge ((v1\_funct\_2\ X0\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))) \Rightarrow (\neg(v5\_pre\_topc\ X0\ k5\_topmetr\ (k15\_euclid\ np\_\_2)) \wedge ((v2\_funct\_1\ X0) \wedge (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))) \Rightarrow (\neg(k1\_funct\_1\ X1\ k6\_numbers = k1\_funct\_1\ X0\ np\_\_1) \wedge ((k1\_funct\_1\ X1\ np\_\_1 = k1\_funct\_1\ X0\ k6\_numbers) \wedge ((k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X1 = k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X0) \wedge ((v5\_pre\_topc\ X1\ k5\_topmetr\ (k15\_euclid\ np\_\_2)) \wedge (v2\_funct\_1\ X1)))))))) \tag{2}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\Rightarrow (\forall X4.((\neg v1\_xboole\_0\ X4)\wedge((v2\_compts\_1\ X4\ (k15\_euclid\ np\_\_2))\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))\Rightarrow(((X4 = ReplSep\ (toset\ (\lambda X6 : \iota.m1\_subset\_1\ X6\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))\ (\lambda X6 : \iota.k12\_euclid\ X6 = np\_\_1)\ (\lambda X6 : \iota.X6))\wedge((r1\_jordan6\ X4\ X0\ X1)\wedge((r1\_jordan6\ X4\ X1\ X2)\wedge(r1\_jordan6\ X4\ X2\ X3))))\Rightarrow(\forall X6.((v1\_funct\_1\ X6)\wedge((v1\_funct\_2\ X6\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\wedge(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))))\Rightarrow(\forall X7.((v1\_funct\_1\ X7)\wedge((v1\_funct\_2\ X7\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\wedge(m1\_subset\_1\ X7\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))))\Rightarrow(\neg(v5\_pre\_topc\ X6\ k5\_topmetr\ (k15\_euclid\ np\_\_2))\wedge((v2\_funct\_1\ X6)\wedge((v5\_pre\_topc\ X7\ k5\_topmetr\ (k15\_euclid\ np\_\_2))\wedge((v2\_funct\_1\ X7)\wedge((X5 = ReplSep\ (toset\ (\lambda X8 : \iota.m1\_subset\_1\ X8\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))\ (\lambda X8 : \iota.r1\_xxreal\_0\ (k12\_euclid\ X8\ np\_\_1)\ (\lambda X8 : \iota.X8))\wedge((k1\_funct\_1\ X6\ k6\_numbers = X0)\wedge((k1\_funct\_1\ X6\ np\_\_1 = X2)\wedge((k1\_funct\_1\ X7\ k6\_numbers = X3)\wedge((k1\_funct\_1\ X7\ np\_\_1 = X1)\wedge((r1\_tarski\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X6)\ X5)\wedge((r1\_tarski\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X7)\ X5)\wedge(r1\_xboole\_0\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X6)\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))\ X7))))))))))))))))))))))$$