

t19_integra5 (TM- NdZHrXbTqL7RqbuLk3WUiiTai4WMUMbH2)

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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 $v2_measure5 : \iota \Rightarrow o$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_intgra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_intgra5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_intgra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ &X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow \\ &(\forall X2. (v1_xreal_0 X2) \Rightarrow (\forall X3. (v1_xreal_0 X3) \Rightarrow (\forall X4. \\ &(v1_xreal_0 X4) \Rightarrow (((X0 = k1_rcomp_1 X1 X3) \wedge (X0 = k1_rcomp_1 X2 X4)) \Rightarrow \\ &((X1 = X2) \wedge (X3 = X4))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (((\neg v1_xboole_0 \\ X0) \wedge (v2_measure5 X0)) \Leftrightarrow (\exists X1. (m1_subset_1 X1 k1_numbers) \wedge \\ (\exists X2. (m1_subset_1 X2 k1_numbers) \wedge ((r1_xxreal_0 X1 X2) \wedge \\ (X0 = k1_rcomp_1 X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow (\forall X2. \\ ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\ k1_numbers)))) \Rightarrow (((r1_xxreal_0 X0 X1) \Rightarrow (k4_intgra5 X0 X1 X2 = k2_intgra5 \\ (k3_intgra5 X0 X1) X2)) \wedge ((\neg r1_xxreal_0 X0 X1) \Rightarrow (k4_intgra5 X0 \\ X1 X2 = k1_real_1 (k2_intgra5 (k3_intgra5 X1 X0) X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 \\ X0 X1) \Rightarrow (k3_intgra5 X0 X1 = k1_rcomp_1 X0 X1))) \quad (4)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad k1_numbers k1_numbers)))) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge (\\ & \quad v2_measure5 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 k1_numbers)))) \Rightarrow \\ & \quad (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3.(m1_subset_1 \\ & \quad X3 k1_numbers) \Rightarrow ((X1 = k1_rcomp_1 X2 X3) \Rightarrow (k2_integra5 X1 X0 = k4_integra5 \\ & \quad \quad X2 X3 X0)))))) \end{aligned}$$