

t38_prob_2
(TMPLifpU9K1skZfXkrkwDR1Vbna61XdYsfH)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k3_prob_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.(m1_prob_1 X2 X0 X1) \Rightarrow (\forall X3. \\ & (m1_prob_1 X3 X0 X1) \Rightarrow (\forall X4.(m2_prob_1 X4 X0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 \\ & (k1_seq_1 X4 X2) k6_numbers) \wedge ((\neg r1_xxreal_0 (k1_seq_1 X4 X3) k6_numbers) \wedge \\ & (k1_seq_1 (k3_prob_2 X0 X1 X4 X3) X2 \neq k10_real_1 (k8_real_1 (k1_seq_1 \\ & (k3_prob_2 X0 X1 X4 X2) X3) (k1_seq_1 X4 X2)) (k1_seq_1 X4 X3))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.(m2_prob_1 X2 X0 X1) \Rightarrow (\forall X3. \\ & (m1_prob_1 X3 X0 X1) \Rightarrow (\forall X4.(m1_prob_1 X4 X0 X1) \Rightarrow (\forall X5. \\ & (m1_prob_1 X5 X0 X1) \Rightarrow (\forall X6.(m1_prob_1 X6 X0 X1) \Rightarrow (((r1_xboole_0 \\ & X4 X5) \wedge (X6 = k3_subset_1 X0 (k6_prob_1 X0 X1 X4 X5))) \Rightarrow ((r1_xxreal_0 \\ & (k1_seq_1 X2 X4) k6_numbers) \vee ((r1_xxreal_0 (k1_seq_1 X2 X5) k6_numbers) \vee \\ & ((r1_xxreal_0 (k1_seq_1 X2 X6) k6_numbers) \vee (k1_seq_1 X2 X3 = k7_real_1 \\ & (k7_real_1 (k8_real_1 (k1_seq_1 (k3_prob_2 X0 X1 X2 X4) X3) (k1_seq_1 \\ & X2 X4)) (k8_real_1 (k1_seq_1 (k3_prob_2 X0 X1 X2 X5) X3) (k1_seq_1 \\ & X2 X5))) (k8_real_1 (k1_seq_1 (k3_prob_2 X0 X1 X2 X6) X3) (k1_seq_1 \\ & X2 X6))))))))))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.(m1_prob_1 X2 X0 X1) \Rightarrow (\forall X3. \\
& (m1_prob_1 X3 X0 X1) \Rightarrow (\forall X4.(m1_prob_1 X4 X0 X1) \Rightarrow (\forall X5. \\
& (m1_prob_1 X5 X0 X1) \Rightarrow (\forall X6.(m2_prob_1 X6 X0 X1) \Rightarrow (((r1_xboole_0 \\
& X3 X4) \wedge (X5 = k3_subset_1 X0 (k6_prob_1 X0 X1 X3 X4))) \Rightarrow ((r1_xxreal_0 \\
& (k1_seq_1 X6 X2) k6_numbers) \vee ((r1_xxreal_0 (k1_seq_1 X6 X3) k6_numbers) \vee \\
& ((r1_xxreal_0 (k1_seq_1 X6 X4) k6_numbers) \vee ((r1_xxreal_0 (k1_seq_1 \\
& X6 X5) k6_numbers) \vee ((k1_seq_1 (k3_prob_2 X0 X1 X6 X2) X3 = k10_real_1 \\
& (k8_real_1 (k1_seq_1 (k3_prob_2 X0 X1 X6 X3) X2) (k1_seq_1 X6 X3)) \\
& (k7_real_1 (k7_real_1 (k8_real_1 (k1_seq_1 (k3_prob_2 X0 X1 X6 \\
& X3) X2) (k1_seq_1 X6 X3)) (k8_real_1 (k1_seq_1 (k3_prob_2 X0 X1 X6 \\
& X4) X2) (k1_seq_1 X6 X4))) (k8_real_1 (k1_seq_1 (k3_prob_2 X0 X1 \\
& X6 X5) X2) (k1_seq_1 X6 X5)))))) \wedge ((k1_seq_1 (k3_prob_2 X0 X1 X6 X2) \\
& X4 = k10_real_1 (k8_real_1 (k1_seq_1 (k3_prob_2 X0 X1 X6 X4) X2) (\\
& k1_seq_1 X6 X4)) (k7_real_1 (k7_real_1 (k8_real_1 (k1_seq_1 (k3_prob_2 \\
& X0 X1 X6 X3) X2) (k1_seq_1 X6 X3)) (k8_real_1 (k1_seq_1 (k3_prob_2 \\
& X0 X1 X6 X4) X2) (k1_seq_1 X6 X4))) (k8_real_1 (k1_seq_1 (k3_prob_2 \\
& X0 X1 X6 X5) X2) (k1_seq_1 X6 X5)))))) \wedge (k1_seq_1 (k3_prob_2 X0 X1 X6 \\
& X2) X5 = k10_real_1 (k8_real_1 (k1_seq_1 (k3_prob_2 X0 X1 X6 X5) X2) \\
& (k1_seq_1 X6 X5)) (k7_real_1 (k7_real_1 (k8_real_1 (k1_seq_1 (\\
& k3_prob_2 X0 X1 X6 X3) X2) (k1_seq_1 X6 X3)) (k8_real_1 (k1_seq_1 \\
& (k3_prob_2 X0 X1 X6 X4) X2) (k1_seq_1 X6 X4))) (k8_real_1 (k1_seq_1 \\
& (k3_prob_2 X0 X1 X6 X5) X2) (k1_seq_1 X6 X5))))))))))
\end{aligned}$$