

# t4\_random\_1 (TM- Gysvq5wYuNgkLAK5ZJ8CsDoMjYTLxGQuv)

October 27, 2020

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  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_numbers : \iota$  be given. Let  $v10\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v6\_supinf\_2 : \iota \Rightarrow o$  be given. Let  $v4\_measure1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_xxreal\_0 : \iota$  be given. Let  $k12\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_extreal1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_measure6 : \iota \Rightarrow \iota$  be given. Let  $r1\_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k1\_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge \\
& ((v1\_prob\_1 X1 X0) \wedge ((v4\_prob\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& (k1\_zfmisc\_1 X0)))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
& X2 X1 k7\_numbers) \wedge ((v10\_valued\_0 X2) \wedge ((v6\_supinf\_2 X2) \wedge ((v4\_measure1 \\
& X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 k7\_numbers)))))) \Rightarrow \\
& (\forall X3. ((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& X0 k7\_numbers)))) \Rightarrow (\forall X4. (m2\_subset\_1 X4 (k1\_zfmisc\_1 X0) \\
& X1) \Rightarrow (\forall X5. (m1\_subset\_1 X5 k1\_numbers) \Rightarrow (((r1\_mesfunc5 \\
& X0 X1 X2 X3) \wedge (r1\_tarski X4 (k1\_relset\_1 X0 X3)) \wedge (\forall X6. (m1\_subset\_1 \\
& X6 X0) \Rightarrow ((X6 \in X4) \Rightarrow (r1\_xxreal\_0 (k12\_supinf\_2 X3 X6) X5)))) \Rightarrow (( \\
& r1\_xxreal\_0 k1\_xxreal\_0 (k12\_supinf\_2 X2 X4) \vee (r1\_xxreal\_0 ( \\
& k7\_mesfunc5 X0 X1 X2 (k2\_partfun1 X0 k7\_numbers X3 X4) (k1\_extreal1 \\
& (k1\_measure6 X5) (k12\_supinf\_2 X2 X4)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(k2\_partfun1 \\ & X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v3\_valued\_0 \\ & X0)))\Rightarrow(k1\_seq\_1 X0 X1 = k1\_funct\_1 X0 X1) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v2\_valued\_0 \\ & X0)))\Rightarrow(k12\_supinf\_2 X0 X1 = k1\_funct\_1 X0 X1) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow((v1\_funct\_1 \\ & (k2\_partfun1 X0 X1 X2 X3))\wedge(m1\_subset\_1 (k2\_partfun1 X0 X1 X2 X3) \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((v1\_funct\_1 X1)\wedge( \\ & m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k1\_numbers))))\Rightarrow \\ & ((v1\_funct\_1 (k1\_mesfunc5 X0 X1))\wedge(m1\_subset\_1 (k1\_mesfunc5 \\ & X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k7\_numbers)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.((v1\_funct\_1 X1)\wedge( \\ & m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k1\_numbers))))\Rightarrow( \\ & k1\_mesfunc5 X0 X1 = X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0 X1)\wedge \\ & ((v1\_prob\_1 X1 X0)\wedge((v4\_prob\_1 X1 X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.((v1\_funct\_1 X2)\wedge((v1\_funct\_2 \\ & X2 X1 k7\_numbers)\wedge((v10\_valued\_0 X2)\wedge((v6\_supinf\_2 X2)\wedge((v4\_measure1 \\ & X2 X0 X1)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 k7\_numbers))))))))\Rightarrow \\ & (\forall X3.((v1\_funct\_1 X3)\wedge(m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 k1\_numbers))))\Rightarrow((r3\_mesfunc6 X0 X1 X2 X3)\Leftrightarrow(r1\_mesfunc5 X0 X1 \\ & X2 (k1\_mesfunc5 X0 X3)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge \\ & ((v1\_prob\_1 X1 X0) \wedge ((v4\_prob\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 X0)))))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ & X2 X1 k7\_numbers) \wedge ((v10\_valued\_0 X2) \wedge ((v6\_supinf\_2 X2) \wedge ((v4\_measure1 \\ & X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 k7\_numbers)))))) \Rightarrow \\ & (\forall X3.((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 k1\_numbers)))) \Rightarrow (k1\_mesfunc6 X0 X1 X2 X3 = k7\_mesfunc5 X0 X1 X2 \\ & (k1\_mesfunc5 X0 X3)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v3\_valued\_0 X0)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v2\_valued\_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v5\_relat\_1 X0 k1\_numbers)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v3\_valued\_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \quad (13)$$

### Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge \\ & ((v1\_prob\_1 X1 X0) \wedge ((v4\_prob\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 X0)))))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ & X2 X1 k7\_numbers) \wedge ((v10\_valued\_0 X2) \wedge ((v6\_supinf\_2 X2) \wedge ((v4\_measure1 \\ & X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 k7\_numbers)))))) \Rightarrow \\ & (\forall X3.((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 k1\_numbers)))) \Rightarrow (\forall X4.(m2\_subset\_1 X4 (k1\_zfmisc\_1 X0 \\ & X1) \Rightarrow (\forall X5.(m1\_subset\_1 X5 k1\_numbers) \Rightarrow (((r3\_mesfunc6 \\ & X0 X1 X2 X3) \wedge ((r1\_tarski X4 (k1\_relset\_1 X0 X3)) \wedge (\forall X6.(m1\_subset\_1 \\ & X6 X0) \Rightarrow ((X6 \in X4) \Rightarrow (r1\_xxreal\_0 (k1\_seq\_1 X3 X6) X5)))))) \Rightarrow ((r1\_xxreal\_0 \\ & k1\_xxreal\_0 (k12\_supinf\_2 X2 X4)) \vee (r1\_xxreal\_0 (k1\_mesfunc6 \\ & X0 X1 X2 (k2\_partfun1 X0 k1\_numbers X3 X4)) (k1\_extreal1 (k1\_measure6 \\ & X5) (k12\_supinf\_2 X2 X4))))))))) \end{aligned}$$