(*** MAKROER BEGYNDER ***)
$[\mathrm{ph}_1 \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{ph}_1 \doteq \mathsf{a}_{\mathrm{Ph}}]\rceil)]$
$[\mathrm{ph}_2 \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{ph}_2 \doteq \mathsf{b}_{\mathrm{Ph}}]\rceil)]$
$[\mathrm{ph}_3 \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{ph}_3 \doteq \mathsf{c}_{\mathrm{Ph}}]\rceil)]$
$[\mathrm{ph}_4 \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{ph}_4 \doteq \mathsf{d}_{\mathrm{Ph}}]\rceil)]$
$[\mathrm{ph}_5 \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{ph}_5 \doteq \mathsf{e}_{\mathrm{Ph}}]\rceil)]$
$[\mathrm{ph}_6 \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{ph}_6 \doteq \mathsf{f}_{\mathrm{Ph}}]\rceil)]$
$[\mathsf{x} \dot{\wedge} \mathsf{y} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{x} \dot{\wedge} \mathsf{y} \doteq \dot{\neg}((\mathsf{x} \Rightarrow \dot{\neg}(\mathsf{y})\mathrm{n}))\mathrm{n}]\rceil)]$
$[\mathsf{x} \dot{\vee} \mathsf{y} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{x} \dot{\vee} \mathsf{y} \doteq \dot{\neg}(\mathsf{x})\mathrm{n} \Rightarrow \mathsf{y}]\rceil)]$
$[\mathsf{x} \dot{\Leftrightarrow} \mathsf{y} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{x} \dot{\Leftrightarrow} \mathsf{y} \doteq (\mathsf{x} \Rightarrow \mathsf{y}) \dot{\wedge} (\mathsf{y} \Rightarrow \mathsf{x})]\rceil)]$
$[\mathsf{x} \neq \mathsf{y} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{x} \neq \mathsf{y} \doteq \dot{\neg}(\mathsf{x}{=}{=}\mathsf{y})\mathrm{n}]\rceil)]$
$[\mathsf{x} \notin \mathsf{y} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{x} \notin \mathsf{y} \doteq \dot{\neg}(\mathsf{x} \in \mathsf{y})\mathrm{n}]\rceil)]$
$[\mathsf{x} \subseteq \mathsf{y} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{x} \subseteq \mathsf{y} \doteq \forall(\mathrm{S1ob})\colon((\mathrm{S1ob}) \in \mathsf{x} \Rightarrow (\mathrm{S1ob}) \in \mathsf{y})]\rceil)]$
$[\{\mathsf{x}\} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\{\mathsf{x}\} \doteq \{\mathsf{x},\mathsf{x}\}]\rceil)]$
$[\mathsf{x} \cup \mathsf{y} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{x} \cup \mathsf{y} \doteq \cup\{\{\mathsf{x}\},\{\mathsf{y}\}\}]\rceil)]$
$[\mathsf{x} \cap \mathsf{y} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{x} \cap \mathsf{y} \doteq \{\mathrm{ph} \in \mathsf{x} \cup \mathsf{y} \mid \mathrm{ph}_3 \in \mathsf{x} \dot{\wedge} \mathrm{ph}_3 \in \mathsf{y}\}]\rceil)]$
$[\langle \mathsf{x},\mathsf{y}\rangle \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\langle \mathsf{x},\mathsf{y}\rangle \doteq \{\{\mathsf{x}\},\{\mathsf{x},\mathsf{y}\}\}]\rceil)]$
$[\mathsf{r}(\mathsf{x},\mathsf{y}) \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{r}(\mathsf{x},\mathsf{y}) \doteq \langle \mathsf{x},\mathsf{y}\rangle \in \mathsf{r}]\rceil)]$
$[\mathrm{ReflRel}(\mathsf{r},\mathsf{x}) \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{ReflRel}(\mathsf{r},\mathsf{x}) \doteq \forall s\colon(s \in \mathsf{x} \Rightarrow \mathsf{r}(s,s))]\rceil)]$
$[\mathrm{SymRel}(\mathsf{r},\mathsf{x}) \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{SymRel}(\mathsf{r},\mathsf{x}) \doteq \forall s, t\colon(s \in \mathsf{x} \Rightarrow t \in \mathsf{x} \Rightarrow \mathsf{r}(s,t) \Rightarrow \mathsf{r}(t,s))]\rceil)]$
$[\mathrm{TransRel}(\mathsf{r},\mathsf{x}) \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{TransRel}(\mathsf{r},\mathsf{x}) \doteq \forall s,t,u\colon(s \in \mathsf{x} \Rightarrow t \in \mathsf{x} \Rightarrow u \in \mathsf{x} \Rightarrow \mathsf{r}(s,t) \Rightarrow \mathsf{r}(t,u) \Rightarrow \mathsf{r}(s,u))]\rceil)]$

$[\mathrm{EqRel}(\mathsf{r},\mathsf{x}) \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{EqRel}(\mathsf{r},\mathsf{x}) \doteq \mathrm{ReflRel}(\mathsf{r},\mathsf{x}) \dot{\wedge} \mathrm{SymRel}(\mathsf{r},\mathsf{x}) \dot{\wedge} \mathrm{TransRel}(\mathsf{r},\mathsf{x})]\rceil)]$

$[\mathcal{BS} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathcal{BS} \doteq \underline{\mathsf{bs}}]\rceil)]$
$[\mathsf{OBS} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{OBS} \doteq \overline{\mathsf{bs}}]\rceil)]$
$[[\mathsf{x} \in \mathsf{bs}]_\mathsf{r} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[[\mathsf{x} \in \mathsf{bs}]_\mathsf{r} \doteq \{\mathrm{ph} \in \mathsf{bs} \mid \mathsf{r}(\mathrm{ph}_1,\mathsf{x})\}]\rceil)]$

$[\mathsf{bs}/\mathsf{r} \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{bs}/\mathsf{r} \doteq \{\mathrm{ph} \in \mathrm{P}(\mathsf{bs}) \mid \mathrm{Ex}_{20} \in \mathsf{bs} \dot{\wedge} [\mathrm{Ex}_{20} \in \mathsf{bs}]_\mathsf{r}{=}{=}\mathrm{ph}_2\}]\rceil)]$

$[\mathrm{Partition}(\mathsf{p},\mathsf{bs}) \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{Partition}(\mathsf{p},\mathsf{bs}) \doteq (\forall s\colon(s \in \mathsf{p} \Rightarrow s \neq \emptyset)) \dot{\wedge}$
$(\forall s,t\colon(s \in \mathsf{p} \Rightarrow t \in \mathsf{p} \Rightarrow s \neq t \Rightarrow s \cap t{=}{=}\emptyset)) \dot{\wedge}$
$\cup\,\mathsf{p}{=}{=}\mathsf{bs}]\rceil)]$

(*** EKSISTENS-VARIABLE ***)
$[\mathsf{x}^{\mathrm{Ex}} \overset{\text{val}}{\to} \mathsf{x} \overset{\mathrm{r}}{=} \lceil \mathsf{x}_{\mathrm{Ex}} \rceil]$

$[\mathrm{Ex}_1 \overset{\text{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{Ex}_1 \doteq \mathsf{a}_{\mathrm{Ex}}]\rceil)]$

$[\mathrm{Ex}_2 \stackrel{\mathrm{macro}}{\to} \lambda t.\lambda s.\lambda c.\tilde{\mathcal{M}}_4(t,s,c,\lceil[\mathrm{Ex}_2 \ddot{=} b_{\mathrm{Ex}}]\rceil)]$
$[\mathrm{Ex}_{10} \stackrel{\mathrm{macro}}{\to} \lambda t.\lambda s.\lambda c.\tilde{\mathcal{M}}_4(t,s,c,\lceil[\mathrm{Ex}_{10} \ddot{=} j_{\mathrm{Ex}}]\rceil)]$
$[\mathrm{Ex}_{20} \stackrel{\mathrm{macro}}{\to} \lambda t.\lambda s.\lambda c.\tilde{\mathcal{M}}_4(t,s,c,\lceil[\mathrm{Ex}_{20} \ddot{=} t_{\mathrm{Ex}}]\rceil)]$
$[\langle a{\equiv}b|x{:}{==}t\rangle_{\mathrm{Ex}} \stackrel{\mathrm{macro}}{\to} \lambda t.\lambda s.\lambda c.\tilde{\mathcal{M}}_4(t,s,c,\lceil[\langle a{\equiv}b|x{:}{==}t\rangle_{\mathrm{Ex}} \ddot{=}$
$\langle\lceil a\rceil{\equiv}^0\lceil b\rceil|\lceil x\rceil{:}{==}\lceil t\rceil\rangle_{\mathrm{Ex}}]\rceil)]$

$[\langle a{\equiv}^0 b|x{:}{==}t\rangle_{\mathrm{Ex}} \stackrel{\mathrm{val}}{\to} \lambda c.x^{\mathrm{Ex}} \wedge \langle a{\equiv}^1 b|x{:}{==}t\rangle_{\mathrm{Ex}}]$

$[\langle a{\equiv}^1 b|x{:}{==}t\rangle_{\mathrm{Ex}} \stackrel{\mathrm{val}}{\to} a!x!t!$
$\mathrm{If}(b \stackrel{\mathrm{r}}{=} \lceil\forall_{\mathrm{obj}} u{:}\, v\rceil, F,$
$\mathrm{If}(b^{\mathrm{Ex}} \wedge b \stackrel{\mathrm{t}}{=} x, a \stackrel{\mathrm{t}}{=} t, \mathrm{If}($
$a \stackrel{\mathrm{r}}{=} b, \langle a^{\mathrm{t}}{\equiv}^{*} b^{\mathrm{t}}|x{:}{==}t\rangle_{\mathrm{Ex}}, F)))]$

$[\langle a{\equiv}^{*} b|x{:}{==}t\rangle_{\mathrm{Ex}} \stackrel{\mathrm{val}}{\to} b!x!t!\mathrm{If}(a, T, \mathrm{If}(\langle a^{\mathrm{h}}{\equiv}^1 b^{\mathrm{h}}|x{:}{==}t\rangle_{\mathrm{Ex}}, \langle a^{\mathrm{t}}{\equiv}^{*} b^{\mathrm{t}}|x{:}{==}t\rangle_{\mathrm{Ex}}, F))]$

(*** AKSIOMATISK SYSTEM ***)
$[\mathrm{SystemQ} \stackrel{\mathrm{stmt}}{\to} \forall\overline{(fx)}{:}\,\forall\overline{(fy)}{:}\, R(\overline{(fx)}) ++R(\overline{(fy)}) == R(\overline{(fy)}) ++R(\overline{(fx)}) \oplus$
$\forall\overline{(fx)}{:}\,\forall\overline{(fy)}{:}\,\forall\overline{(fz)}{:}\, R(\overline{(fx)}) **R(\overline{(fy)}) **R(\overline{(fz)}) == R(\overline{(fx)}) **R(\overline{(fy)}) **R(\overline{(fz)}) \oplus$
$\forall\overline{(fx)}{:}\,\forall\overline{(rx)}{:}\,\forall\overline{(ry)}{:}\, \overline{(rx)} == \overline{(ry)} \vdash \overline{(fx)} \in \overline{(rx)} \vdash \overline{(fx)} \in \overline{(ry)} \oplus \forall\underline{m}{:}\, \mathrm{UB}(01//02 *$
$*\mathrm{xs}[\underline{m}] ++\mathrm{us}[\underline{m}], \mathrm{SetOfReals}) \vdash \mathrm{xs}[(\underline{m}+1)] == \mathrm{xs}[\underline{m}] \oplus \forall\underline{x}{:}\,\forall\underline{y}{:}\, \underline{x} <= \underline{y} \Rightarrow \underline{y} <=$
$\underline{x} \Rightarrow \underline{x} = \underline{y} \oplus \forall\underline{s}{:}\,\forall\underline{x}{:}\,\forall\underline{y}{:}\, \dot{\neg}(\underline{s} \in \{\underline{x},\underline{y}\} \Rightarrow \dot{\neg}(\underline{s}==\underline{x})n \Rightarrow \underline{s}==\underline{y} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{s}==$
$\underline{x})n \Rightarrow \underline{s}==\underline{y} \Rightarrow \underline{s} \in \{\underline{x},\underline{y}\})n)n \oplus \forall\underline{m}{:}\,\forall\underline{n}{:}\, \underline{n} = 0 \vdash \mathrm{BS}(\underline{m},\underline{n}) = \mathrm{rec}(1+1)(\exp)\underline{m} \oplus$
$\forall\underline{x}{:}\, (\underline{x}+0) = \underline{x} \oplus \forall\overline{(fx)}{:}\,\forall\overline{(fy)}{:}\, R(\overline{(fx)}) == R(\overline{(fy)}) \vdash \mathrm{SF}(\overline{(fx)},\overline{(fy)}) \oplus \forall\underline{x}{:}\,\forall\underline{y}{:}\, \underline{x} =$
$\underline{y} \Rightarrow \underline{x} <= \underline{y} \oplus \forall\underline{a}{:}\,\forall\underline{b}{:}\, \underline{a} \Rightarrow \underline{b} \vdash \underline{a} \vdash \underline{b} \oplus \forall\overline{(fx)}{:}\,\forall\overline{(fy)}{:}\,\forall\overline{(fz)}{:}\, R(\overline{(fx)}) = R(\overline{(fy)}) \vdash$
$R(\overline{(fx)}) ++R(\overline{(fz)}) = R(\overline{(fy)}) ++R(\overline{(fz)}) \oplus \forall\overline{(fx)}{:}\, R(\overline{(fx)}) ++R(0f) ==$
$R(\overline{(fx)}) \oplus \forall\underline{x}{:}\, (\underline{x}*1) = \underline{x} \oplus \forall\underline{a}{:}\,\forall\underline{b}{:}\, \underline{a} \vdash \underline{b} \oplus \forall\overline{(rx)}{:}\,\forall\overline{(ry)}{:}\, \overline{(rx)} == \overline{(ry)} \vdash \overline{(ry)} ==$
$\overline{(rx)} \oplus \forall\underline{m}{:}\,\forall\underline{x}{:}\, \underline{m} = 0 \vdash \underline{x}(\exp)\underline{m} = 1 \oplus \forall\underline{x}{:}\,\forall\underline{y}{:}\,\forall\underline{z}{:}\, 0 <= \underline{z} \Rightarrow \underline{x} <= \underline{y} \Rightarrow$
$(\underline{x}*\underline{z}) <= (\underline{y}*\underline{z}) \oplus \forall\overline{(fx)}{:}\, R(\overline{(fx)}) **R(1f) == R(\overline{(fx)}) \oplus \dot{\neg}(0=1)n \oplus$
$\forall\underline{m}{:}\, \mathrm{Nat}(\underline{m}) \Vdash 0 <= \underline{m} \oplus \forall\underline{x}{:}\,\forall\underline{y}{:}\, \dot{\neg}(\underline{x}==\underline{y} \Rightarrow \forall_{\mathrm{obj}}\bar{s}{:}\, \dot{\neg}(\bar{s} \in \underline{x} \Rightarrow \bar{s} \in \underline{y} \Rightarrow \dot{\neg}(\bar{s} \in$
$\underline{y} \Rightarrow \bar{s} \in \underline{x})n)n \Rightarrow \dot{\neg}(\forall_{\mathrm{obj}}\bar{s}{:}\, \dot{\neg}(\bar{s} \in \underline{x} \Rightarrow \bar{s} \in \underline{y} \Rightarrow \dot{\neg}(\bar{s} \in \underline{y} \Rightarrow \bar{s} \in \underline{x})n)n \Rightarrow \underline{x}==$
$\underline{y})n)n \oplus \forall\overline{(rx)}{:}\,\forall\overline{(ry)}{:}\,\forall\overline{(rz)}{:}\, \overline{(rx)} == \overline{(ry)} \vdash \overline{(ry)} == \overline{(rz)} \vdash \overline{(rx)} == \overline{(rz)} \oplus$
$\forall\underline{x}{:}\,\forall\underline{y}{:}\, (\underline{x}+\underline{y}) = (\underline{y}+\underline{x}) \oplus \forall\underline{m}{:}\,\forall\overline{(fx)}{:}\,\forall\overline{(fy)}{:}\, \overline{(fx)} +_{\mathrm{f}} \overline{(fy)}[\underline{m}] = (\overline{(fx)}[\underline{m}] + \overline{(fy)}[\underline{m}]) \oplus$
$\forall\overline{(v1)}{:}\,\forall\underline{a}{:}\,\forall\underline{b}{:}\,\forall\underline{c}{:}\, \langle\underline{b}{\equiv}\underline{a}|\overline{(v1)}{:}{==}0\rangle_{\mathrm{Me}} \Vdash \langle\underline{c}{\equiv}\underline{a}|\overline{(v1)}{:}{==}(\overline{(v1)}+1)\rangle_{\mathrm{Me}} \Vdash \underline{b} \Rightarrow$
$\forall_{\mathrm{obj}}\overline{(v1)}{:}\, \underline{a} \Rightarrow \underline{c} \Rightarrow \forall_{\mathrm{obj}}\overline{(v1)}{:}\, \underline{a} \oplus \forall\underline{m}{:}\,\forall\underline{n}{:}\, \underline{n} = 0 \vdash \mathrm{UStelescope}(\underline{m},\underline{n}) =$
$|(\mathrm{us}[\underline{m}] + (-u\mathrm{us}[(\underline{m}+1)]))| \oplus \forall\overline{(fx)}{:}\,\forall\overline{(fy)}{:}\,\forall\overline{(fz)}{:}\, R(\overline{(fx)}) ++R(\overline{(fy)}) ++R(\overline{(fz)}) =$
$R(\overline{(fx)}) ++R(\overline{(fy)}) ++R(\overline{(fz)}) \oplus \forall\underline{x}{:}\,\forall\underline{y}{:}\, (\underline{x}*\underline{y}) = (\underline{y}*\underline{x}) \oplus \forall\overline{(fx)}{:}\,\forall\overline{(fy)}{:}\, \overline{(fx)} \in$
$R(\overline{(fy)}) \vdash \mathrm{SF}(\overline{(fx)},\overline{(fy)}) \oplus \forall\underline{x}{:}\,\forall\underline{y}{:}\,\forall\underline{z}{:}\, \underline{x} = \underline{y} \Rightarrow (\underline{x}*\underline{z}) = (\underline{y}*\underline{z}) \oplus \forall\underline{a}{:}\, \underline{a} \vdash \underline{a} \oplus$
$\forall\underline{m}{:}\, \mathrm{UB}(01//02 **\mathrm{xs}[\underline{m}] ++\mathrm{us}[\underline{m}], \mathrm{SetOfReals}) \vdash \mathrm{us}[(\underline{m}+1)] ==$
$01//02 **\mathrm{xs}[\underline{m}] ++\mathrm{us}[\underline{m}] \oplus \forall\underline{x}{:}\,\forall\underline{y}{:}\, \dot{\neg}(\underline{x} <= \underline{y})n \Rightarrow \underline{y} <= \underline{x} \oplus \forall\underline{s}{:}\,\forall\underline{x}{:}\, \dot{\neg}(\underline{s} \in$
$P(\underline{x}) \Rightarrow \forall_{\mathrm{obj}}\bar{s}{:}\, \bar{s} \in \underline{s} \Rightarrow \bar{s} \in \underline{x} \Rightarrow \dot{\neg}(\forall_{\mathrm{obj}}\bar{s}{:}\, \bar{s} \in \underline{s} \Rightarrow \bar{s} \in \underline{x} \Rightarrow \underline{s} \in P(\underline{x}))n)n \oplus$
$\mathrm{us}[0] == \mathrm{xs}[0] ++R(1f) \oplus \forall\underline{x}{:}\, \underline{x} <= \underline{x} \oplus \forall\underline{s}{:}\, \dot{\neg}(\underline{s} \in \emptyset)n \oplus \forall\underline{x}{:}\, (\underline{x} + (-u\underline{x})) = 0 \oplus$
$\forall\underline{x}{:}\,\forall\underline{y}{:}\,\forall\underline{z}{:}\, \underline{x} = \underline{y} \Rightarrow \underline{x} = \underline{z} \Rightarrow \underline{y} = \underline{z} \oplus \forall\underline{m}{:}\,\forall\underline{n}{:}\, \dot{\neg}(0 <= \underline{n} \Rightarrow \dot{\neg}(\dot{\neg}(0 = \underline{n})n)n)n \vdash$
$\mathrm{UStelescope}(\underline{m},\underline{n}) = (|(\mathrm{us}[(\underline{m}+\underline{n})]+(-u\mathrm{us}[(\underline{m}+(\underline{n}+1))]))|+\mathrm{UStelescope}(\underline{m},(\underline{n}+$
$(-u1)))) \oplus \forall\overline{(fx)}{:}\,\forall\overline{(fy)}{:}\,\forall\overline{(fz)}{:}\, R(\overline{(fx)} +_{\mathrm{f}} \overline{(fy)} +_{\mathrm{f}} \overline{(fz)}) == R(\overline{(fx)} +_{\mathrm{f}} \overline{(fy)} +_{\mathrm{f}} \overline{(fz)}) \oplus$
$\forall\underline{x}{:}\, \dot{\neg}(\underline{x} = 0)n \Rightarrow (\underline{x} * \mathrm{rec}\underline{x}) = 1 \oplus \forall\underline{a}{:}\,\forall\underline{b}{:}\, \dot{\neg}(\underline{b})n \Rightarrow \underline{a} \vdash \dot{\neg}(\underline{b})n \Rightarrow \dot{\neg}(\underline{a})n \vdash \underline{b} \oplus$

$\forall\underline{(\mathrm{rx})}\colon \underline{(\mathrm{rx})} == \underline{(\mathrm{rx})} \oplus \forall\underline{\mathsf{m}}\colon \dot{\neg}\,(\mathrm{UB}(01//02 * *\mathrm{xs}[\underline{\mathsf{m}}] + +\mathrm{us}[\underline{\mathsf{m}}], \mathrm{SetOfReals}))\mathrm{n} \vdash$
$\mathrm{us}[(\underline{\mathsf{m}} + 1)] == \mathrm{us}[\underline{\mathsf{m}}] \oplus \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{y}}\colon \forall\underline{\mathsf{z}}\colon \underline{\mathsf{x}} <= \underline{\mathsf{y}} \Rightarrow (\underline{\mathsf{x}} + \underline{\mathsf{z}}) <= (\underline{\mathsf{y}} + \underline{\mathsf{z}}) \oplus$
$\forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \forall\underline{\mathsf{p}}\colon \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{z}}\colon \underline{\mathsf{p}}^{\mathrm{Ph}} \wedge \langle\underline{\mathsf{b}}{\equiv}\underline{\mathsf{a}}|\underline{\mathsf{p}}{:==}\underline{\mathsf{z}}\rangle_{\mathrm{Ph}} \Vdash \dot{\neg}\,(\underline{\mathsf{z}} \in \{\mathrm{ph} \in \underline{\mathsf{x}} \mid \underline{\mathsf{a}}\} \Rightarrow \dot{\neg}\,(\underline{\mathsf{z}} \in \underline{\mathsf{x}} \Rightarrow$
$\dot{\neg}\,(\underline{\mathsf{b}})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}\,(\dot{\neg}\,(\underline{\mathsf{z}} \in \underline{\mathsf{x}} \Rightarrow \dot{\neg}\,(\underline{\mathsf{b}})\mathrm{n})\mathrm{n} \Rightarrow \underline{\mathsf{z}} \in \{\mathrm{ph} \in \underline{\mathsf{x}} \mid \underline{\mathsf{a}}\})\mathrm{n})\mathrm{n} \oplus$
$\forall\underline{\mathsf{m}}\colon \forall\underline{(\mathrm{fx})}\colon \mathrm{R}(\underline{(\mathrm{fx})}) + +(- - \mathrm{R}(\underline{(\mathrm{fx})})) == \mathrm{R}(0\mathrm{f}) \oplus \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{y}}\colon \forall\underline{\mathsf{z}}\colon (\underline{\mathsf{x}} * (\underline{\mathsf{y}} + \underline{\mathsf{z}})) =$
$((\underline{\mathsf{x}} * \underline{\mathsf{y}}) + (\underline{\mathsf{x}} * \underline{\mathsf{z}})) \oplus \forall\underline{\mathsf{m}}\colon \forall\underline{\mathsf{n}}\colon \mathrm{Nat}(\underline{\mathsf{m}}) \Vdash \mathrm{Nat}(\underline{\mathsf{n}}) \Vdash \dot{\neg}\,(\underline{\mathsf{m}} <= (\underline{\mathsf{n}} + 1) \Rightarrow \dot{\neg}\,(\dot{\neg}\,(\underline{\mathsf{m}} =$
$(\underline{\mathsf{n}} + 1))\mathrm{n})\mathrm{n})\mathrm{n} \vdash \underline{\mathsf{m}} <= \underline{\mathsf{n}} \oplus \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{t}}\colon \forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \langle\lceil\underline{\mathsf{a}}\rceil{\equiv^0}\lceil\underline{\mathsf{b}}\rceil|\lceil\underline{\mathsf{x}}\rceil{:==}\lceil\underline{\mathsf{t}}\rceil\rangle_{\mathrm{Ex}} \Vdash \underline{\mathsf{a}} \vdash \underline{\mathsf{b}} \oplus$
$\forall\underline{\mathsf{m}}\colon \forall\underline{\mathsf{x}}\colon \dot{\neg}\,(0 <= \underline{\mathsf{m}} \Rightarrow \dot{\neg}\,(\dot{\neg}\,(0 = \underline{\mathsf{m}})\mathrm{n})\mathrm{n})\mathrm{n} \vdash \underline{\mathsf{x}}(\mathrm{exp})\underline{\mathsf{m}} =$
$(\underline{\mathsf{x}} * \underline{\mathsf{x}}(\mathrm{exp})(\underline{\mathsf{m}} + (-\mathrm{u}1))) \oplus \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{y}}\colon \forall\underline{\mathsf{z}}\colon ((\underline{\mathsf{x}} + \underline{\mathsf{y}}) + \underline{\mathsf{z}}) = (\underline{\mathsf{x}} + (\underline{\mathsf{y}} + \underline{\mathsf{z}})) \oplus$
$\forall\underline{(\mathrm{v}1)}\colon \forall\underline{(\mathrm{v}2)}\colon \forall\underline{\mathsf{n}}\colon \forall\underline{(\epsilon)}\colon \forall\underline{(\mathrm{fx})}\colon \forall_{\mathrm{obj}}\underline{(\epsilon)}\colon \dot{\neg}\,(\forall_{\mathrm{obj}}\underline{\mathsf{n}}\colon \dot{\neg}\,(\forall_{\mathrm{obj}}\underline{(\mathrm{v}1)}\colon \forall_{\mathrm{obj}}\underline{(\mathrm{v}2)}\colon \dot{\neg}\,(0 <=$
$\underline{(\epsilon)} \Rightarrow \dot{\neg}\,(\dot{\neg}\,(0 = \underline{(\epsilon)})\mathrm{n})\mathrm{n})\mathrm{n} \Rightarrow \underline{\mathsf{n}} <= \underline{(\mathrm{v}1)} \Rightarrow \underline{\mathsf{n}} <= \underline{(\mathrm{v}2)} \Rightarrow$
$\dot{\neg}\,(|(\underline{(\mathrm{fx})}[\underline{(\mathrm{v}1)}] + (-\mathrm{u}\underline{(\mathrm{fx})}[\underline{(\mathrm{v}2)}]))| <= \underline{(\epsilon)} \Rightarrow \dot{\neg}\,(\dot{\neg}\,(|(\underline{(\mathrm{fx})}[\underline{(\mathrm{v}1)}] + (-\mathrm{u}\underline{(\mathrm{fx})}[\underline{(\mathrm{v}2)}]))| =$
$\underline{(\epsilon)})\mathrm{n})\mathrm{n})\mathrm{n})\mathrm{n})\mathrm{n} \oplus \forall\underline{\mathsf{x}}\colon \forall\underline{(\mathrm{v}1)}\colon \forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \langle\underline{\mathsf{a}}{\equiv}\underline{\mathsf{b}}|\underline{(\mathrm{v}1)}{:==}\underline{\mathsf{x}}\rangle_{\mathrm{Me}} \Vdash \forall_{\mathrm{obj}}\underline{(\mathrm{v}1)}\colon \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{a}} \oplus$
$\forall\underline{\mathsf{m}}\colon \forall\underline{\mathsf{n}}\colon \dot{\neg}\,(0 <= \underline{\mathsf{n}} \Rightarrow \dot{\neg}\,(\dot{\neg}\,(0 = \underline{\mathsf{n}})\mathrm{n})\mathrm{n})\mathrm{n} \vdash \mathrm{BS}(\underline{\mathsf{m}}, \underline{\mathsf{n}}) =$
$(\mathrm{rec}(1 + 1)(\mathrm{exp})(\underline{\mathsf{m}} + \underline{\mathsf{n}}) + \mathrm{BS}(\underline{\mathsf{m}}, (\underline{\mathsf{n}} + (-\mathrm{u}1)))) \oplus \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{y}}\colon \forall\underline{\mathsf{z}}\colon ((\underline{\mathsf{x}} * \underline{\mathsf{y}}) * \underline{\mathsf{z}}) =$
$(\underline{\mathsf{x}} * (\underline{\mathsf{y}} * \underline{\mathsf{z}})) \oplus \forall\underline{(\mathrm{fx})}\colon \forall\underline{(\mathrm{fy})}\colon \mathrm{SF}(\underline{(\mathrm{fx})}, \underline{(\mathrm{fy})}) \vdash \mathrm{R}(\underline{(\mathrm{fx})}) == \mathrm{R}(\underline{(\mathrm{fy})}) \oplus \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{y}}\colon \forall\underline{\mathsf{z}}\colon \underline{\mathsf{x}} =$
$\underline{\mathsf{y}} \Rightarrow (\underline{\mathsf{x}} + \underline{\mathsf{z}}) = (\underline{\mathsf{y}} + \underline{\mathsf{z}}) \oplus \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{a}}\colon \underline{\mathsf{a}} \vdash \forall_{\mathrm{obj}}\underline{\mathsf{x}}\colon \underline{\mathsf{a}} \oplus$
$\forall\underline{\mathsf{m}}\colon \dot{\neg}\,(\mathrm{UB}(01//02 * *\mathrm{xs}[\underline{\mathsf{m}}] + +\mathrm{us}[\underline{\mathsf{m}}], \mathrm{SetOfReals}))\mathrm{n} \vdash \mathrm{xs}[(\underline{\mathsf{m}} + 1)] ==$
$01//02 * *\mathrm{xs}[\underline{\mathsf{m}}] + +\mathrm{us}[\underline{\mathsf{m}}] \oplus \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{y}}\colon \forall\underline{\mathsf{z}}\colon \underline{\mathsf{x}} <= \underline{\mathsf{y}} \Rightarrow \underline{\mathsf{y}} <= \underline{\mathsf{z}} \Rightarrow \underline{\mathsf{x}} <= \underline{\mathsf{z}} \oplus$
$\forall\underline{\mathsf{s}}\colon \forall\underline{\mathsf{x}}\colon \dot{\neg}\,(\underline{\mathsf{s}} \in \cup\underline{\mathsf{x}} \Rightarrow \dot{\neg}\,(\underline{\mathsf{s}} \in \mathsf{j}_{\mathrm{Ex}} \Rightarrow \dot{\neg}\,(\mathsf{j}_{\mathrm{Ex}} \in \underline{\mathsf{x}})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}\,(\dot{\neg}\,(\underline{\mathsf{s}} \in \mathsf{j}_{\mathrm{Ex}} \Rightarrow \dot{\neg}\,(\mathsf{j}_{\mathrm{Ex}} \in$
$\underline{\mathsf{x}})\mathrm{n})\mathrm{n} \Rightarrow \underline{\mathsf{s}} \in \cup\underline{\mathsf{x}})\mathrm{n})\mathrm{n} \oplus \forall\underline{(\mathrm{fx})}\colon \forall\underline{(\mathrm{fy})}\colon \mathrm{R}(\underline{(\mathrm{fx})}) * *\mathrm{R}(\underline{(\mathrm{fy})}) == \mathrm{R}(\underline{(\mathrm{fy})}) * *\mathrm{R}(\underline{(\mathrm{fx})}) \oplus$
$\forall\underline{(\mathrm{fx})}\colon \forall\underline{(\mathrm{rx})}\colon \forall\underline{(\mathrm{ry})}\colon \underline{(\mathrm{rx})} == \underline{(\mathrm{ry})} \vdash \underline{(\mathrm{fx})} \in \underline{(\mathrm{ry})} \vdash \underline{(\mathrm{fx})} \in \underline{(\mathrm{rx})}]$

$[\mathrm{MP} \overset{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \vdash \underline{\mathsf{a}} \vdash \underline{\mathsf{b}}][\mathrm{MP} \overset{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\mathrm{Gen} \overset{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{a}}\colon \underline{\mathsf{a}} \vdash \forall_{\mathrm{obj}}\underline{\mathsf{x}}\colon \underline{\mathsf{a}}][\mathrm{Gen} \overset{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\mathrm{Repetition} \overset{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall\underline{\mathsf{a}}\colon \underline{\mathsf{a}} \vdash \underline{\mathsf{a}}][\mathrm{Repetition} \overset{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\mathrm{Neg} \overset{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \dot{\neg}\,(\underline{\mathsf{b}})\mathrm{n} \Rightarrow \underline{\mathsf{a}} \vdash \dot{\neg}\,(\underline{\mathsf{b}})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{\mathsf{a}})\mathrm{n} \vdash \underline{\mathsf{b}}][\mathrm{Neg} \overset{\mathrm{proof}}{\to}$
$\mathrm{Rule\ tactic}]$

$[\mathrm{Ded} \overset{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \underline{\mathsf{a}} \vdash \underline{\mathsf{b}}][\mathrm{Ded} \overset{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\mathrm{ExistIntro} \overset{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{t}}\colon \forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \langle\lceil\underline{\mathsf{a}}\rceil{\equiv^0}\lceil\underline{\mathsf{b}}\rceil|\lceil\underline{\mathsf{x}}\rceil{:==}\lceil\underline{\mathsf{t}}\rceil\rangle_{\mathrm{Ex}} \Vdash \underline{\mathsf{a}} \vdash$
$\underline{\mathsf{b}}][\mathrm{ExistIntro} \overset{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\mathrm{Extensionality} \overset{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{y}}\colon \dot{\neg}\,(\underline{\mathsf{x}}{==}\underline{\mathsf{y}} \Rightarrow \forall_{\mathrm{obj}}\bar{\mathsf{s}}\colon \dot{\neg}\,(\bar{\mathsf{s}} \in \underline{\mathsf{x}} \Rightarrow \bar{\mathsf{s}} \in \underline{\mathsf{y}} \Rightarrow$
$\dot{\neg}\,(\bar{\mathsf{s}} \in \underline{\mathsf{y}} \Rightarrow \bar{\mathsf{s}} \in \underline{\mathsf{x}})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}\,(\forall_{\mathrm{obj}}\bar{\mathsf{s}}\colon \dot{\neg}\,(\bar{\mathsf{s}} \in \underline{\mathsf{x}} \Rightarrow \bar{\mathsf{s}} \in \underline{\mathsf{y}} \Rightarrow \dot{\neg}\,(\bar{\mathsf{s}} \in \underline{\mathsf{y}} \Rightarrow \bar{\mathsf{s}} \in \underline{\mathsf{x}})\mathrm{n})\mathrm{n} \Rightarrow$
$\underline{\mathsf{x}}{==}\underline{\mathsf{y}})\mathrm{n})\mathrm{n}][\mathrm{Extensionality} \overset{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\emptyset\mathrm{def} \overset{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall\underline{\mathsf{s}}\colon \dot{\neg}\,(\underline{\mathsf{s}} \in \emptyset)\mathrm{n}][\emptyset\mathrm{def} \overset{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\mathrm{PairDef} \overset{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall\underline{\mathsf{s}}\colon \forall\underline{\mathsf{x}}\colon \forall\underline{\mathsf{y}}\colon \dot{\neg}\,(\underline{\mathsf{s}} \in \{\underline{\mathsf{x}}, \underline{\mathsf{y}}\} \Rightarrow \dot{\neg}\,(\underline{\mathsf{s}}{==}\underline{\mathsf{x}})\mathrm{n} \Rightarrow \underline{\mathsf{s}}{==}\underline{\mathsf{y}} \Rightarrow$
$\dot{\neg}\,(\dot{\neg}\,(\underline{\mathsf{s}}{==}\underline{\mathsf{x}})\mathrm{n} \Rightarrow \underline{\mathsf{s}}{==}\underline{\mathsf{y}} \Rightarrow \underline{\mathsf{s}} \in \{\underline{\mathsf{x}}, \underline{\mathsf{y}}\})\mathrm{n})\mathrm{n}][\mathrm{PairDef} \overset{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

[UnionDef $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{s}\colon \forall \underline{x}\colon \dot{\neg}(\underline{s} \in \cup \underline{x} \Rightarrow \dot{\neg}(\underline{s} \in j_{\text{Ex}} \Rightarrow \dot{\neg}(j_{\text{Ex}} \in \underline{x})n)n \Rightarrow \dot{\neg}(\dot{\neg}(\underline{s} \in j_{\text{Ex}} \Rightarrow \dot{\neg}(j_{\text{Ex}} \in \underline{x})n)n \Rightarrow \underline{s} \in \cup \underline{x})n)n$][UnionDef $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[PowerDef $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{s}\colon \forall \underline{x}\colon \dot{\neg}(\underline{s} \in P(\underline{x}) \Rightarrow \forall_{\text{obj}} \bar{s}\colon \bar{s} \in \underline{s} \Rightarrow \bar{s} \in \underline{x} \Rightarrow \dot{\neg}(\forall_{\text{obj}} \bar{s}\colon \bar{s} \in \underline{s} \Rightarrow \bar{s} \in \underline{x} \Rightarrow \underline{s} \in P(\underline{x}))n)n$][PowerDef $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[SeparationDef $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{a}\colon \forall \underline{b}\colon \forall \underline{p}\colon \forall \underline{x}\colon \forall \underline{z}\colon \underline{p}^{\text{Ph}} \wedge \langle \underline{b} \equiv \underline{a} | \underline{p} {:=} {=} \underline{z} \rangle_{\text{Ph}} \Vdash \dot{\neg}(\underline{z} \in \{ph \in \underline{x} \mid \underline{a}\} \Rightarrow \dot{\neg}(\underline{z} \in \underline{x} \Rightarrow \dot{\neg}(\underline{b})n)n \Rightarrow \dot{\neg}(\dot{\neg}(\underline{z} \in \underline{x} \Rightarrow \dot{\neg}(\underline{b})n)n \Rightarrow \underline{z} \in \{ph \in \underline{x} \mid \underline{a}\})n)n$][SeparationDef $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

———————- RRRRRRRRRRRRRR ———————-

(*** import fra A.M. ***)

[TimesCommutativity(R) $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(fx)}\colon \forall \underline{(fy)}\colon R(\underline{(fx)}) * *R(\underline{(fy)}) == R(\underline{(fy)}) * *R(\underline{(fx)})$][TimesCommutativity(R) $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

(*** aksiomer ***)

[leqReflexivity $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon \underline{x} <= \underline{x}$][leqReflexivity $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[leqAntisymmetryAxiom $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon \forall \underline{y}\colon \underline{x} <= \underline{y} \Rightarrow \underline{y} <= \underline{x} \Rightarrow \underline{x} = \underline{y}$][leqAntisymmetryAxiom $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[leqTransitivityAxiom $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon \forall \underline{y}\colon \forall \underline{z}\colon \underline{x} <= \underline{y} \Rightarrow \underline{y} <= \underline{z} \Rightarrow \underline{x} <= \underline{z}$][leqTransitivityAxiom $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[leqTotality $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon \forall \underline{y}\colon \dot{\neg}(\underline{x} <= \underline{y})n \Rightarrow \underline{y} <= \underline{x}$][leqTotality $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[leqAdditionAxiom $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon \forall \underline{y}\colon \forall \underline{z}\colon \underline{x} <= \underline{y} \Rightarrow (\underline{x} + \underline{z}) <= (\underline{y} + \underline{z})$][leqAdditionAxiom $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[leqMultiplicationAxiom $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon \forall \underline{y}\colon \forall \underline{z}\colon 0 <= \underline{z} \Rightarrow \underline{x} <= \underline{y} \Rightarrow (\underline{x} * \underline{z}) <= (\underline{y} * \underline{z})$][leqMultiplicationAxiom $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[plusAssociativity $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon \forall \underline{y}\colon \forall \underline{z}\colon ((\underline{x} + \underline{y}) + \underline{z}) = (\underline{x} + (\underline{y} + \underline{z}))$][plusAssociativity $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[plusCommutativity $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon \forall \underline{y}\colon (\underline{x} + \underline{y}) = (\underline{y} + \underline{x})$][plusCommutativity $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[Negative $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon (\underline{x} + (-u\underline{x})) = 0$][Negative $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[plus0 $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon (\underline{x} + 0) = \underline{x}$][plus0 $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[timesAssociativity $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon \forall \underline{y}\colon \forall \underline{z}\colon ((\underline{x} * \underline{y}) * \underline{z}) = (\underline{x} * (\underline{y} * \underline{z}))$][timesAssociativity $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[timesCommutativity $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x}\colon \forall \underline{y}\colon (\underline{x} * \underline{y}) = (\underline{y} * \underline{x})$][timesCommutativity $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

[ReciprocalAxiom $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x} \colon \dot{\neg} (\underline{x} = 0)n \Rightarrow (\underline{x} * \text{rec}\underline{x}) =$ $1]$[ReciprocalAxiom $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[times1 $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x} \colon (\underline{x} * 1) = \underline{x}$][times1 $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[Distribution $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x} \colon \forall \underline{y} \colon \forall \underline{z} \colon (\underline{x} * (\underline{y} + \underline{z})) = ((\underline{x} * \underline{y}) + (\underline{x} * \underline{z}))$][Distribution $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[0not1 $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \dot{\neg} (0 = 1)n$][0not1 $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[EqualityAxiom $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x} \colon \forall \underline{y} \colon \forall \underline{z} \colon \underline{x} = \underline{y} \Rightarrow \underline{x} = \underline{z} \Rightarrow \underline{y} = \underline{z}$][EqualityAxiom $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[EqLeqAxiom $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x} \colon \forall \underline{y} \colon \underline{x} = \underline{y} \Rightarrow \underline{x} <= \underline{y}$][EqLeqAxiom $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[EqAdditionAxiom $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x} \colon \forall \underline{y} \colon \forall \underline{z} \colon \underline{x} = \underline{y} \Rightarrow (\underline{x} + \underline{z}) = (\underline{y} + \underline{z})$][EqAdditionAxiom $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[EqMultiplicationAxiom $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x} \colon \forall \underline{y} \colon \forall \underline{z} \colon \underline{x} = \underline{y} \Rightarrow (\underline{x} * \underline{z}) = (\underline{y} * \underline{z})$][EqMultiplicationAxiom $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[A4(Axiom) $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{x} \colon \forall \underline{(v1)} \colon \forall \underline{a} \colon \forall \underline{b} \colon \langle \underline{a} \equiv \underline{b} | \underline{(v1)} \colon == \underline{x} \rangle_{\text{Me}} \Vdash \forall_{\text{obj}} \underline{(v1)} \colon \underline{b} \Rightarrow \underline{a}$][A4(Axiom) $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
(*** XX snydeaksiomer ***)
[==Reflexivity $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(rx)} \colon \underline{(rx)} == \underline{(rx)}$][==Reflexivity $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[==Symmetry $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(rx)} \colon \forall \underline{(ry)} \colon \underline{(rx)} == \underline{(ry)} \vdash \underline{(ry)} == \underline{(rx)}$][==Symmetry $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[==Transitivity $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(rx)} \colon \forall \underline{(ry)} \colon \forall \underline{(rz)} \colon \underline{(rx)} == \underline{(ry)} \vdash \underline{(ry)} == \underline{(rz)} \vdash \underline{(rx)} == \underline{(rz)}$][==Transitivity $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
XX ikke 100procent identisk med originalen fra equivalence-relations
[SENC1 $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(fx)} \colon \forall \underline{(rx)} \colon \forall \underline{(ry)} \colon \underline{(rx)} == \underline{(ry)} \vdash \underline{(fx)} \in \underline{(rx)} \vdash \underline{(fx)} \in \underline{(ry)}$][SENC1 $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
XX boer bevises ud fra nummer 1
[SENC2 $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(fx)} \colon \forall \underline{(rx)} \colon \forall \underline{(ry)} \colon \underline{(rx)} == \underline{(ry)} \vdash \underline{(fx)} \in \underline{(ry)} \vdash \underline{(fx)} \in \underline{(rx)}$][SENC2 $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[PlusF $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{m} \colon \forall \underline{(fx)} \colon \forall \underline{(fy)} \colon \underline{(fx)} +_{\text{f}} \underline{(fy)}[\underline{m}] = (\underline{(fx)}[\underline{m}] + \underline{(fy)}[\underline{m}])$][PlusF $\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[From $==\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(fx)} \colon \forall \underline{(fy)} \colon \text{R}(\underline{(fx)}) == \text{R}(\underline{(fy)}) \vdash \text{SF}(\underline{(fx)}, \underline{(fy)})$][From $==\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]
[To $==\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(fx)} \colon \forall \underline{(fy)} \colon \text{SF}(\underline{(fx)}, \underline{(fy)}) \vdash \text{R}(\underline{(fx)}) == \text{R}(\underline{(fy)})$][To $==\stackrel{\text{proof}}{\rightarrow}$ Rule tactic]

$[\mathrm{FromInR} \stackrel{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall \underline{(\mathrm{fx})}\colon \forall \underline{(\mathrm{fy})}\colon \underline{(\mathrm{fx})} \in \mathrm{R}(\underline{(\mathrm{fy})}) \vdash$

$\mathrm{SF}(\underline{(\mathrm{fx})}, \underline{(\mathrm{fy})})][\mathrm{FromInR} \stackrel{\mathrm{proof}}{\to} \text{Rule tactic}]$

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$[\mathrm{M}_1 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{M}_1 \doteqdot \underline{(\mathrm{m1})}] \rceil)]$

$[\mathrm{M}_2 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{M}_2 \doteqdot \underline{(\mathrm{m2})}] \rceil)]$

$[\mathrm{N}_1 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{N}_1 \doteqdot \underline{(\mathrm{n1})}] \rceil)]$

$[\mathrm{N}_2 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{N}_2 \doteqdot \underline{(\mathrm{n2})}] \rceil)]$

$[\mathrm{N}_3 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{N}_3 \doteqdot \underline{(\mathrm{n3})}] \rceil)]$

$[\epsilon \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\epsilon \doteqdot \underline{(\epsilon)}] \rceil)]$

$[\epsilon 1 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\epsilon 1 \doteqdot \underline{(\epsilon)_1}] \rceil)]$

$[\epsilon 2 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\epsilon 2 \doteqdot \underline{(\epsilon 2)}] \rceil)]$

$[\mathrm{X}_1 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{X}_1 \doteqdot \underline{(\mathrm{x1})}] \rceil)]$

$[\mathrm{X}_2 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{X}_2 \doteqdot \underline{(\mathrm{x2})}] \rceil)]$

$[\mathrm{Y}_1 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{Y}_1 \doteqdot \underline{(\mathrm{y1})}] \rceil)]$

$[\mathrm{Y}_2 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{Y}_2 \doteqdot \underline{(\mathrm{y2})}] \rceil)]$

$[\mathrm{V}_1 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{V}_1 \doteqdot \underline{(\mathrm{v1})}] \rceil)]$

$[\mathrm{V}_2 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{V}_2 \doteqdot \underline{(\mathrm{v2})}] \rceil)]$

$[\mathrm{V}_3 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{V}_3 \doteqdot \underline{(\mathrm{v3})}] \rceil)]$

$[\mathrm{V}_4 \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{V}_4 \doteqdot \underline{(\mathrm{v4})}] \rceil)]$

$[\mathrm{V}_{2\mathrm{n}} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{V}_{2\mathrm{n}} \doteqdot \underline{(\mathrm{v2n})}] \rceil)]$

$[\mathrm{FX} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{FX} \doteqdot \underline{(\mathrm{fx})}] \rceil)]$

$[\mathrm{FY} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{FY} \doteqdot \underline{(\mathrm{fy})}] \rceil)]$

$[\mathrm{FZ} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{FZ} \doteqdot \underline{(\mathrm{fz})}] \rceil)]$

$[\mathrm{FU} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{FU} \doteqdot \underline{(\mathrm{fu})}] \rceil)]$

$[\mathrm{FV} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{FV} \doteqdot \underline{(\mathrm{fv})}] \rceil)]$

$[\mathrm{FW} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{FW} \doteqdot \underline{(\mathrm{fw})}] \rceil)]$

$[\mathrm{FEP} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{FEP} \doteqdot \underline{(\mathrm{fep})}] \rceil)]$

$[\mathrm{RX} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{RX} \doteqdot \underline{(\mathrm{rx})}] \rceil)]$

$[\mathrm{RY} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{RY} \doteqdot \underline{(\mathrm{ry})}] \rceil)]$

$[\mathrm{RZ} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{RZ} \doteqdot \underline{(\mathrm{rz})}] \rceil)]$

$[\mathrm{RU} \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [\mathrm{RU} \doteqdot \underline{(\mathrm{ru})}] \rceil)]$

$[(\mathrm{SX}) \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [(\mathrm{SX}) \doteqdot \underline{(\mathrm{sx})}] \rceil)]$

$[(\mathrm{SX1}) \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [(\mathrm{SX1}) \doteqdot \underline{(\mathrm{sx1})}] \rceil)]$

$[(\mathrm{SY}) \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [(\mathrm{SY}) \doteqdot \underline{(\mathrm{sy})}] \rceil)]$

$[(\mathrm{SY1}) \stackrel{\mathrm{macro}}{\to} \lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil [(\mathrm{SY1}) \doteqdot \underline{(\mathrm{sy1})}] \rceil)]$

$[(\mathrm{SZ}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{SZ}) \ddot{=} \underline{(\mathrm{sz})}]\rceil)]$

$[(\mathrm{SZ1}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{SZ1}) \ddot{=} \underline{(\mathrm{sz1})}]\rceil)]$

$[(\mathrm{SU}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{SU}) \ddot{=} \underline{(\mathrm{su})}]\rceil)]$

$[(\mathrm{SU1}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{SU1}) \ddot{=} \underline{(\mathrm{su1})}]\rceil)]$

$[\mathrm{FXS} \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{FXS} \ddot{=} \underline{(\mathrm{fxs})}]\rceil)]$

$[\mathrm{FYS} \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{FYS} \ddot{=} \underline{(\mathrm{fys})}]\rceil)]$

$[(\mathrm{F1}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{F1}) \ddot{=} \underline{(\mathrm{f1})}]\rceil)]$

$[(\mathrm{F2}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{F2}) \ddot{=} \underline{(\mathrm{f2})}]\rceil)]$

$[(\mathrm{F3}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{F3}) \ddot{=} \underline{(\mathrm{f3})}]\rceil)]$

$[(\mathrm{F4}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{F4}) \ddot{=} \underline{(\mathrm{f4})}]\rceil)]$

$[(\mathrm{OP1}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{OP1}) \ddot{=} \underline{(\mathrm{op1})}]\rceil)]$

$[(\mathrm{OP2}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{OP2}) \ddot{=} \underline{(\mathrm{op2})}]\rceil)]$

$[(\mathrm{R1}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{R1}) \ddot{=} \underline{(\mathrm{r1})}]\rceil)]$

$[(\mathrm{S1}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{S1}) \ddot{=} \underline{(\mathrm{s1})}]\rceil)]$

$[(\mathrm{S2}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{S2}) \ddot{=} \underline{(\mathrm{s2})}]\rceil)]$

$[(\mathrm{EPob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{EPob}) \ddot{=} \overline{(\epsilon)}]\rceil)]$

$[(\mathrm{CRS1ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{CRS1ob}) \ddot{=} \overline{(\mathrm{crs1})}]\rceil)]$

$[(\mathrm{F1ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{F1ob}) \ddot{=} \overline{(\mathrm{f1})}]\rceil)]$

$[(\mathrm{F2ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{F2ob}) \ddot{=} \overline{(\mathrm{f2})}]\rceil)]$

$[(\mathrm{F3ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{F3ob}) \ddot{=} \overline{(\mathrm{f3})}]\rceil)]$

$[(\mathrm{F4ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{F4ob}) \ddot{=} \overline{(\mathrm{f4})}]\rceil)]$

$[(\mathrm{N1ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{N1ob}) \ddot{=} \overline{(\mathrm{n1})}]\rceil)]$

$[(\mathrm{N2ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{N2ob}) \ddot{=} \overline{(\mathrm{n2})}]\rceil)]$

$[(\mathrm{OP1ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{OP1ob}) \ddot{=} \overline{(\mathrm{op1})}]\rceil)]$

$[(\mathrm{OP2ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{OP2ob}) \ddot{=} \overline{(\mathrm{op2})}]\rceil)]$

$[(\mathrm{R1ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{R1ob}) \ddot{=} \overline{(\mathrm{r1})}]\rceil)]$

$[(\mathrm{S1ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{S1ob}) \ddot{=} \overline{(\mathrm{s1})}]\rceil)]$

$[(\mathrm{S2ob}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{S2ob}) \ddot{=} \overline{(\mathrm{s2})}]\rceil)]$

$[(\mathrm{fx}) \leq_{\mathrm{f}} (\mathrm{fy}) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(\mathrm{fx}) \leq_{\mathrm{f}} (\mathrm{fy}) \ddot{=} (\mathrm{fx}) <_{\mathrm{f}} (\mathrm{fy}) \dot{\vee} \mathrm{SF}((\mathrm{fx}),(\mathrm{fy}))]\rceil)]$

$[\mathrm{Ex3} \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathrm{Ex3} \ddot{=} \mathsf{c}_{\mathrm{Ex}}]\rceil)]$

$[\exists(\mathrm{v1})\colon \mathsf{a} \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\exists(\mathrm{v1})\colon \mathsf{a} \ddot{=} \dot{\neg}(\forall(\mathrm{v1})\colon \dot{\neg}(\mathsf{a})\mathrm{n})\mathrm{n}]\rceil)]$

$[\mathsf{x} <<== \mathsf{y} \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[\mathsf{x} <<== \mathsf{y} \ddot{=} \mathsf{x} << \mathsf{y} \dot{\vee} \mathsf{x} == \mathsf{y}]\rceil)]$

$[(-1) \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[(-1) \ddot{=} (-\mathrm{u1})]\rceil)]$

$[2 \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[2 \ddot{=} (1+1)]\rceil)]$

$[3 \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[3 \ddot{=} (2+1)]\rceil)]$

$[1/2 \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[1/2 \ddot{=} \mathrm{rec2}]\rceil)]$

$[1/3 \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[1/3 \ddot{=} \mathrm{rec3}]\rceil)]$

$[2/3 \overset{\mathrm{macro}}{\rightarrow} \lambda\mathsf{t}.\lambda\mathsf{s}.\lambda\mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t},\mathsf{s},\mathsf{c},\lceil[2/3 \ddot{=} (2 * 1/3)]\rceil)]$

$[x < y \stackrel{\text{macro}}{\rightarrow} \lambda t.\lambda s.\lambda c.\tilde{\mathcal{M}}_4(t, s, c, \lceil[x < y \ddot{=} x <= y \dot{\wedge} x \neq y]\rceil)]$

$[x \neq y \stackrel{\text{macro}}{\rightarrow} \lambda t.\lambda s.\lambda c.\tilde{\mathcal{M}}_4(t, s, c, \lceil[x \neq y \ddot{=} \dot{\neg}\,(x = y)\mathrm{n}]\rceil)]$

$[(x - y) \stackrel{\text{macro}}{\rightarrow} \lambda t.\lambda s.\lambda c.\tilde{\mathcal{M}}_4(t, s, c, \lceil[(x - y) \ddot{=} (x + (-uy))]\rceil)]$

$[00 \stackrel{\text{macro}}{\rightarrow} \lambda t.\lambda s.\lambda c.\tilde{\mathcal{M}}_4(t, s, c, \lceil[00 \ddot{=} \mathrm{R}(0\mathrm{f})]\rceil)]$

$[01 \stackrel{\text{macro}}{\rightarrow} \lambda t.\lambda s.\lambda c.\tilde{\mathcal{M}}_4(t, s, c, \lceil[01 \ddot{=} \mathrm{R}(1\mathrm{f})]\rceil)]$

$[x!! == y \stackrel{\text{macro}}{\rightarrow} \lambda t.\lambda s.\lambda c.\tilde{\mathcal{M}}_4(t, s, c, \lceil[x!! == y \ddot{=} \dot{\neg}\,(x == y)\mathrm{n}]\rceil)]$

(*** REGELLEMMAER ***)

(*** UDSAGNSLOGIK ***)

$[\mathrm{ToNegatedImply} \stackrel{\text{stmt}}{\rightarrow} \mathrm{SystemQ} \vdash \forall \underline{a}\colon \forall \underline{b}\colon \underline{a} \vdash \dot{\neg}\,(\underline{b})\mathrm{n} \vdash \dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n}]$

$[\mathrm{ToNegatedImply} \stackrel{\text{proof}}{\rightarrow} \lambda c.\lambda x.\mathcal{P}(\lceil \mathrm{SystemQ} \vdash \forall \underline{a}\colon \forall \underline{b}\colon \underline{a} \vdash \dot{\neg}\,(\underline{b})\mathrm{n} \vdash \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n} \vdash \mathrm{RemoveDoubleNeg} \rhd \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n} \gg \underline{a} \Rightarrow \underline{b}; \mathrm{MP} \rhd \underline{a} \Rightarrow \underline{b} \rhd \underline{a} \gg \underline{b}; \mathrm{FromContradiction} \rhd \underline{b} \rhd \dot{\neg}\,(\underline{b})\mathrm{n} \gg \dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n}; \forall \underline{a}\colon \forall \underline{b}\colon \mathrm{Ded} \rhd \forall \underline{a}\colon \forall \underline{b}\colon \underline{a} \vdash \dot{\neg}\,(\underline{b})\mathrm{n} \vdash \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n} \vdash \dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n} \gg \underline{a} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n}; \underline{a} \vdash \dot{\neg}\,(\underline{b})\mathrm{n} \vdash \mathrm{MP2} \rhd \underline{a} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n} \rhd \underline{a} \rhd \dot{\neg}\,(\underline{b})\mathrm{n} \gg \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n}; \mathrm{AutoImply} \gg \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n}; \mathrm{Neg} \rhd \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n} \rhd \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}\,(\dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n})\mathrm{n} \gg \dot{\neg}\,(\underline{a} \Rightarrow \underline{b})\mathrm{n}\rceil, \mathrm{p}_0, c)]$

$[\mathrm{TND} \stackrel{\text{stmt}}{\rightarrow} \mathrm{SystemQ} \vdash \forall \underline{a}\colon \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n}]$

$[\mathrm{TND} \stackrel{\text{proof}}{\rightarrow} \lambda c.\lambda x.\mathcal{P}(\lceil \mathrm{SystemQ} \vdash \forall \underline{a}\colon \mathrm{AutoImply} \gg \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n}; \mathrm{Repetition} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n} \gg \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n}\rceil, \mathrm{p}_0, c)]$

$[\mathrm{FromNegations} \stackrel{\text{stmt}}{\rightarrow} \mathrm{SystemQ} \vdash \forall \underline{a}\colon \forall \underline{b}\colon \underline{a} \Rightarrow \underline{b} \vdash \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \underline{b}]$

$[\mathrm{FromNegations} \stackrel{\text{proof}}{\rightarrow} \lambda c.\lambda x.\mathcal{P}(\lceil \mathrm{SystemQ} \vdash \forall \underline{a}\colon \forall \underline{b}\colon \underline{a} \Rightarrow \underline{b} \vdash \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \mathrm{TND} \gg \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n}; \mathrm{FromDisjuncts} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n} \rhd \underline{a} \Rightarrow \underline{b} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{b} \gg \underline{b}\rceil, \mathrm{p}_0, c)]$

$[\mathrm{prop\ lemma\ imply\ negation} \stackrel{\text{stmt}}{\rightarrow} \mathrm{SystemQ} \vdash \forall \underline{a}\colon \underline{a} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n} \vdash \dot{\neg}\,(\underline{a})\mathrm{n}]$

$[\mathrm{prop\ lemma\ imply\ negation} \stackrel{\text{proof}}{\rightarrow} \lambda c.\lambda x.\mathcal{P}(\lceil \mathrm{SystemQ} \vdash \forall \underline{a}\colon \underline{a} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n} \vdash \mathrm{AutoImply} \gg \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n}; \mathrm{TND} \gg \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n}; \mathrm{FromDisjuncts} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n} \rhd \underline{a} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n} \gg \dot{\neg}\,(\underline{a})\mathrm{n}\rceil, \mathrm{p}_0, c)]$

$[\mathrm{From3Disjuncts} \stackrel{\text{stmt}}{\rightarrow} \mathrm{SystemQ} \vdash \forall \underline{a}\colon \forall \underline{b}\colon \forall \underline{c}\colon \forall \underline{d}\colon \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c} \vdash \underline{a} \Rightarrow \underline{d} \vdash \underline{b} \Rightarrow \underline{d} \vdash \underline{c} \Rightarrow \underline{d} \vdash \underline{d}]$

$[\mathrm{From3Disjuncts} \stackrel{\text{proof}}{\rightarrow} \lambda c.\lambda x.\mathcal{P}(\lceil \mathrm{SystemQ} \vdash \forall \underline{a}\colon \forall \underline{b}\colon \forall \underline{c}\colon \forall \underline{d}\colon \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c} \vdash \underline{b} \Rightarrow \underline{d} \vdash \underline{c} \Rightarrow \underline{d} \vdash \dot{\neg}\,(\underline{a})\mathrm{n} \vdash \mathrm{Repetition} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c} \gg \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c}; \mathrm{MP} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \gg \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c}; \mathrm{FromDisjuncts} \rhd \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c} \rhd \underline{b} \Rightarrow \underline{d} \rhd \underline{c} \Rightarrow \underline{d} \gg \underline{d}; \forall \underline{a}\colon \forall \underline{b}\colon \forall \underline{c}\colon \forall \underline{d}\colon \mathrm{Ded} \rhd \forall \underline{a}\colon \forall \underline{b}\colon \forall \underline{c}\colon \forall \underline{d}\colon \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c} \vdash \underline{b} \Rightarrow \underline{d} \vdash \underline{c} \Rightarrow \underline{d} \vdash \dot{\neg}\,(\underline{a})\mathrm{n} \vdash \underline{d} \gg \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c} \Rightarrow \underline{b} \Rightarrow \underline{d} \Rightarrow \underline{c} \Rightarrow \underline{d} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{d}; \mathrm{AutoImply} \gg \underline{a} \Rightarrow \underline{d} \Rightarrow \underline{a} \Rightarrow \underline{d}; \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c} \vdash \underline{a} \Rightarrow \underline{d} \vdash \underline{b} \Rightarrow \underline{d} \vdash \underline{c} \Rightarrow \underline{d} \vdash \mathrm{MP3} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c} \Rightarrow \underline{b} \Rightarrow \underline{d} \Rightarrow \underline{c} \Rightarrow \underline{d} \Rightarrow \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{d} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \dot{\neg}\,(\underline{b})\mathrm{n} \Rightarrow \underline{c} \rhd \underline{b} \Rightarrow \underline{d} \rhd \underline{c} \Rightarrow \underline{d} \gg \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{d}; \mathrm{MP} \rhd \underline{a} \Rightarrow \underline{d} \Rightarrow \underline{a} \Rightarrow \underline{d} \rhd \underline{a} \Rightarrow \underline{d} \gg \underline{a} \Rightarrow \underline{d}; \mathrm{FromNegations} \rhd \underline{a} \Rightarrow \underline{d} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{d} \gg \underline{d}\rceil, \mathrm{p}_0, c)]$

$[\mathrm{NegateDisjunct1} \stackrel{\text{stmt}}{\rightarrow} \mathrm{SystemQ} \vdash \forall \underline{a}\colon \forall \underline{b}\colon \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}\,(\underline{a})\mathrm{n} \vdash \underline{b}]$

$[\mathrm{NegateDisjunct1} \stackrel{\text{proof}}{\rightarrow} \lambda c.\lambda x.\mathcal{P}(\lceil \mathrm{SystemQ} \vdash \forall \underline{a}\colon \forall \underline{b}\colon \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}\,(\underline{a})\mathrm{n} \vdash \mathrm{Repetition} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{b} \gg \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{b}; \mathrm{MP} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \Rightarrow \underline{b} \rhd \dot{\neg}\,(\underline{a})\mathrm{n} \gg \underline{b}\rceil, \mathrm{p}_0, c)]$

[NegateDisjunct2 $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall\underline{a}\colon\forall\underline{b}\colon \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}(\underline{b})\mathrm{n} \vdash \underline{a}$]

[NegateDisjunct2 $\stackrel{\text{proof}}{\rightarrow}$ $\lambda c.\lambda x.\mathcal{P}(\lceil$SystemQ $\vdash \forall\underline{a}\colon\forall\underline{b}\colon \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}(\underline{b})\mathrm{n} \vdash$ Repetition $\rhd \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \gg \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b};$ NegativeMT $\rhd \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \rhd \dot{\neg}(\underline{b})\mathrm{n} \gg \underline{a}\rceil, \mathrm{p}_0, c)$]

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[ExpandDisjuncts $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall\underline{a}\colon\forall\underline{b}\colon\forall\underline{c}\colon\forall\underline{d}\colon \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \vdash \dot{\neg}(\underline{b})\mathrm{n} \Rightarrow \dot{\neg}(\underline{d})\mathrm{n} \Rightarrow \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n})\mathrm{n}$]

[ExpandDisjuncts $\stackrel{\text{proof}}{\rightarrow}$ $\lambda c.\lambda x.\mathcal{P}(\lceil$SystemQ $\vdash \forall\underline{a}\colon\forall\underline{b}\colon\forall\underline{c}\colon\forall\underline{d}\colon \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \vdash \dot{\neg}(\underline{b})\mathrm{n} \vdash \dot{\neg}(\underline{d})\mathrm{n} \vdash$ NegateDisjunct2 $\rhd \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \rhd \dot{\neg}(\underline{b})\mathrm{n} \gg \underline{a};$ NegateDisjunct2 $\rhd \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \rhd \dot{\neg}(\underline{d})\mathrm{n} \gg \underline{c};$ JoinConjuncts $\rhd \underline{a} \rhd \underline{c} \gg \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n})\mathrm{n}; \forall\underline{a}\colon\forall\underline{b}\colon\forall\underline{c}\colon\forall\underline{d}\colon$ Ded $\rhd \forall\underline{a}\colon\forall\underline{b}\colon\forall\underline{c}\colon\forall\underline{d}\colon \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \vdash \dot{\neg}(\underline{b})\mathrm{n} \vdash \dot{\neg}(\underline{d})\mathrm{n} \vdash \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n})\mathrm{n} \gg \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \Rightarrow \dot{\neg}(\underline{b})\mathrm{n} \Rightarrow \dot{\neg}(\underline{d})\mathrm{n} \Rightarrow \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n})\mathrm{n}; \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \vdash$ MP2 $\rhd \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \Rightarrow \dot{\neg}(\underline{b})\mathrm{n} \Rightarrow \dot{\neg}(\underline{d})\mathrm{n} \Rightarrow \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n})\mathrm{n} \rhd \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \rhd \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \gg \dot{\neg}(\underline{b})\mathrm{n} \Rightarrow \dot{\neg}(\underline{d})\mathrm{n} \Rightarrow \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n})\mathrm{n};$ Repetition $\rhd \dot{\neg}(\underline{b})\mathrm{n} \Rightarrow \dot{\neg}(\underline{d})\mathrm{n} \Rightarrow \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n})\mathrm{n} \gg \dot{\neg}(\underline{b})\mathrm{n} \Rightarrow \dot{\neg}(\underline{d})\mathrm{n} \Rightarrow \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n})\mathrm{n}\rceil, \mathrm{p}_0, c)$]

[From2 $*$ 2Disjuncts $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall\underline{a}\colon\forall\underline{b}\colon\forall\underline{c}\colon\forall\underline{d}\colon\forall\underline{e}\colon \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \vdash \underline{a} \Rightarrow \underline{c} \Rightarrow \underline{e} \vdash \underline{a} \Rightarrow \underline{d} \Rightarrow \underline{e} \vdash \underline{b} \Rightarrow \underline{c} \Rightarrow \underline{e} \vdash \underline{b} \Rightarrow \underline{d} \Rightarrow \underline{e} \vdash \underline{e}$]

[From2 $*$ 2Disjuncts $\stackrel{\text{proof}}{\rightarrow}$ $\lambda c.\lambda x.\mathcal{P}(\lceil$SystemQ $\vdash \forall\underline{a}\colon\forall\underline{b}\colon\forall\underline{c}\colon\forall\underline{d}\colon\forall\underline{e}\colon \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \vdash \underline{a} \Rightarrow \underline{c} \Rightarrow \underline{e} \vdash \underline{a} \Rightarrow \underline{d} \Rightarrow \underline{e} \vdash \underline{a} \vdash$ MP $\rhd \underline{a} \Rightarrow \underline{c} \Rightarrow \underline{e} \rhd \underline{a} \gg \underline{c} \Rightarrow \underline{e};$ MP $\rhd \underline{a} \Rightarrow \underline{d} \Rightarrow \underline{e} \rhd \underline{a} \gg \underline{d} \Rightarrow \underline{e};$ FromDisjuncts $\rhd \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \rhd \underline{c} \Rightarrow \underline{e} \rhd \underline{d} \Rightarrow \underline{e} \gg \underline{e}; \forall\underline{a}\colon\forall\underline{b}\colon\forall\underline{c}\colon\forall\underline{d}\colon\forall\underline{e}\colon \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \vdash \underline{b} \Rightarrow \underline{c} \Rightarrow \underline{e} \vdash \underline{b} \Rightarrow \underline{d} \Rightarrow \underline{e} \vdash \dot{\neg}(\underline{a})\mathrm{n} \vdash$ NegateDisjunct1 $\rhd \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \rhd \dot{\neg}(\underline{a})\mathrm{n} \gg \underline{b};$ MP $\rhd \underline{b} \Rightarrow \underline{c} \Rightarrow \underline{e} \rhd \underline{b} \gg \underline{c} \Rightarrow \underline{e};$ MP $\rhd \underline{b} \Rightarrow \underline{d} \Rightarrow \underline{e} \rhd \underline{b} \gg \underline{d} \Rightarrow \underline{e};$ FromDisjuncts $\rhd \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \rhd \underline{c} \Rightarrow \underline{e} \rhd \underline{d} \Rightarrow \underline{e} \gg \underline{e}; \forall\underline{a}\colon\forall\underline{b}\colon\forall\underline{c}\colon\forall\underline{d}\colon\forall\underline{e}\colon$ Ded $\rhd \forall\underline{a}\colon\forall\underline{b}\colon\forall\underline{c}\colon\forall\underline{d}\colon\forall\underline{e}\colon \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \vdash \underline{a} \Rightarrow \underline{c} \Rightarrow \underline{e} \vdash \underline{a} \Rightarrow \underline{d} \Rightarrow \underline{e} \vdash \underline{a} \vdash \underline{e} \gg \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \Rightarrow \underline{a} \Rightarrow \underline{c} \Rightarrow \underline{e} \Rightarrow \underline{a} \Rightarrow \underline{d} \Rightarrow \underline{e} \Rightarrow \underline{a} \Rightarrow \underline{e};$ Ded $\rhd \forall\underline{a}\colon\forall\underline{b}\colon\forall\underline{c}\colon\forall\underline{d}\colon\forall\underline{e}\colon \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \vdash \underline{b} \Rightarrow \underline{c} \Rightarrow \underline{e} \vdash \underline{b} \Rightarrow \underline{d} \Rightarrow \underline{e} \vdash \dot{\neg}(\underline{a})\mathrm{n} \vdash \underline{e} \gg \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \Rightarrow \underline{b} \Rightarrow \underline{c} \Rightarrow \underline{e} \Rightarrow \underline{b} \Rightarrow \underline{d} \Rightarrow \underline{e} \Rightarrow \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{e}; \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \vdash \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \vdash \underline{a} \Rightarrow \underline{c} \Rightarrow \underline{e} \vdash \underline{a} \Rightarrow \underline{d} \Rightarrow \underline{e} \vdash \underline{b} \Rightarrow \underline{c} \Rightarrow \underline{e} \vdash \underline{b} \Rightarrow \underline{d} \Rightarrow \underline{e} \vdash$ MP3 $\rhd \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \Rightarrow \underline{a} \Rightarrow \underline{c} \Rightarrow \underline{e} \Rightarrow \underline{a} \Rightarrow \underline{d} \Rightarrow \underline{e} \Rightarrow \underline{a} \Rightarrow \underline{e} \rhd \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \rhd \underline{a} \Rightarrow \underline{c} \Rightarrow \underline{e} \rhd \underline{a} \Rightarrow \underline{d} \Rightarrow \underline{e} \gg \underline{a} \Rightarrow \underline{e};$ MP4 $\rhd \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \Rightarrow \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \Rightarrow \underline{b} \Rightarrow \underline{c} \Rightarrow \underline{e} \Rightarrow \underline{b} \Rightarrow \underline{d} \Rightarrow \underline{e} \Rightarrow \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{e} \rhd \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{b} \rhd \dot{\neg}(\underline{c})\mathrm{n} \Rightarrow \underline{d} \rhd \underline{b} \Rightarrow \underline{c} \Rightarrow \underline{e} \rhd \underline{b} \Rightarrow \underline{d} \Rightarrow \underline{e} \gg \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{e};$ FromNegations $\rhd \underline{a} \Rightarrow \underline{e} \rhd \dot{\neg}(\underline{a})\mathrm{n} \Rightarrow \underline{e} \gg \underline{e}\rceil, \mathrm{p}_0, c)$]

(*** SAME-F ***) XX-am

(*** R-AFDELINGEN ***) XX-am

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[FromNegatedImply $\stackrel{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall\underline{a}\colon\forall\underline{b}\colon \dot{\neg}(\underline{a} \Rightarrow \underline{b})\mathrm{n} \vdash \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n})\mathrm{n}$]

[FromNegatedImply $\stackrel{\text{proof}}{\rightarrow}$ $\lambda c.\lambda x.\mathcal{P}(\lceil$SystemQ $\vdash \forall\underline{a}\colon\forall\underline{b}\colon \underline{a} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n} \vdash \underline{a} \vdash$ MP $\rhd \underline{a} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n} \rhd \underline{a} \gg \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n};$ RemoveDoubleNeg $\rhd \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n} \gg \underline{b}; \forall\underline{a}\colon\forall\underline{b}\colon$ Ded $\rhd \forall\underline{a}\colon\forall\underline{b}\colon \underline{a} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n} \vdash \underline{a} \vdash \underline{b} \gg \underline{a} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n} \Rightarrow \underline{a} \Rightarrow \underline{b}; \dot{\neg}(\underline{a} \Rightarrow \underline{b})\mathrm{n} \vdash$ MT $\rhd \underline{a} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n} \Rightarrow \underline{a} \Rightarrow \underline{b} \rhd \dot{\neg}(\underline{a} \Rightarrow \underline{b})\mathrm{n} \gg \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n})\mathrm{n};$ Repetition $\rhd \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n})\mathrm{n} \gg \dot{\neg}(\underline{a} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{b})\mathrm{n})\mathrm{n})\mathrm{n}\rceil, \mathrm{p}_0, c)$]

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$[\mathrm{FromNegated}(2 * \mathrm{Imply}) \stackrel{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \forall \underline{\mathsf{c}} \colon \dot{\neg}(\underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}})\mathrm{n} \vdash \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{c}})\mathrm{n})\mathrm{n})\mathrm{n}]$

$[\mathrm{FromNegated}(2 * \mathrm{Imply}) \stackrel{\mathrm{proof}}{\to} \lambda \mathsf{c}.\lambda \mathsf{x}.\mathcal{P}(\lceil \mathrm{SystemQ} \vdash \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \forall \underline{\mathsf{c}} \colon \dot{\neg}(\underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}})\mathrm{n} \vdash \mathrm{FromNegatedImply} \rhd \dot{\neg}(\underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}})\mathrm{n} \gg \dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}})\mathrm{n})\mathrm{n})\mathrm{n}; \mathrm{FirstConjunct} \rhd \dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}})\mathrm{n})\mathrm{n})\mathrm{n} \gg \underline{\mathsf{a}}; \mathrm{SecondConjunct} \rhd \dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}})\mathrm{n})\mathrm{n})\mathrm{n} \gg \dot{\neg}(\underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}})\mathrm{n}; \mathrm{FromNegatedImply} \rhd \dot{\neg}(\underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}})\mathrm{n} \gg \dot{\neg}(\underline{\mathsf{b}} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{c}})\mathrm{n})\mathrm{n})\mathrm{n}; \mathrm{FirstConjunct} \rhd \dot{\neg}(\underline{\mathsf{b}} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{c}})\mathrm{n})\mathrm{n})\mathrm{n} \gg \underline{\mathsf{b}}; \mathrm{SecondConjunct} \rhd \dot{\neg}(\underline{\mathsf{b}} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{c}})\mathrm{n})\mathrm{n})\mathrm{n} \gg \dot{\neg}(\underline{\mathsf{c}})\mathrm{n}; \mathrm{JoinConjuncts} \rhd \underline{\mathsf{a}} \rhd \underline{\mathsf{b}} \gg \dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\mathrm{n})\mathrm{n}; \mathrm{JoinConjuncts} \rhd \dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\mathrm{n})\mathrm{n} \rhd \dot{\neg}(\underline{\mathsf{c}})\mathrm{n} \gg \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\mathrm{n})\mathrm{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{c}})\mathrm{n})\mathrm{n})\mathrm{n} \rceil, \mathrm{p}_0, \mathsf{c})]$

$[\mathrm{FromNegatedOr} \stackrel{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\mathrm{n} \Rightarrow \underline{\mathsf{b}})\mathrm{n} \vdash \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\mathrm{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\mathrm{n})\mathrm{n})\mathrm{n}]$

$[\mathrm{FromNegatedOr} \stackrel{\mathrm{proof}}{\to} \lambda \mathsf{c}.\lambda \mathsf{x}.\mathcal{P}(\lceil \mathrm{SystemQ} \vdash \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\mathrm{n} \Rightarrow \underline{\mathsf{b}})\mathrm{n} \vdash \mathrm{Repetition} \rhd \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\mathrm{n} \Rightarrow \underline{\mathsf{b}})\mathrm{n} \gg \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\mathrm{n} \Rightarrow \underline{\mathsf{b}})\mathrm{n}; \mathrm{FromNegatedImply} \rhd \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\mathrm{n} \Rightarrow \underline{\mathsf{b}})\mathrm{n} \gg \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\mathrm{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\mathrm{n})\mathrm{n})\mathrm{n} \rceil, \mathrm{p}_0, \mathsf{c})]$

$[\mathrm{InductionAxiom} \stackrel{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall \underline{(\mathrm{v1})} \colon \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \forall \underline{\mathsf{c}} \colon \langle \underline{\mathsf{b}} \equiv \underline{\mathsf{a}} | \underline{(\mathrm{v1})} \colon == 0 \rangle_{\mathrm{Me}} \Vdash \langle \underline{\mathsf{c}} \equiv \underline{\mathsf{a}} | \underline{(\mathrm{v1})} \colon == (\underline{(\mathrm{v1})} + 1) \rangle_{\mathrm{Me}} \Vdash \underline{\mathsf{b}} \Rightarrow \forall_{\mathrm{obj}} \underline{(\mathrm{v1})} \colon \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{c}} \Rightarrow \forall_{\mathrm{obj}} \underline{(\mathrm{v1})} \colon \underline{\mathsf{a}}][\mathrm{InductionAxiom} \stackrel{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\mathrm{LessMinus1(N)} \stackrel{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall \underline{\mathsf{m}} \colon \forall \underline{\mathsf{n}} \colon \mathrm{Nat}(\underline{\mathsf{m}}) \Vdash \mathrm{Nat}(\underline{\mathsf{n}}) \Vdash \dot{\neg}(\underline{\mathsf{m}} <= (\underline{\mathsf{n}} + 1) \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{m}} = (\underline{\mathsf{n}} + 1))\mathrm{n})\mathrm{n})\mathrm{n} \vdash \underline{\mathsf{m}} <= \underline{\mathsf{n}}][\mathrm{LessMinus1(N)} \stackrel{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\mathrm{Nonnegative(N)} \stackrel{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall \underline{\mathsf{m}} \colon \mathrm{Nat}(\underline{\mathsf{m}}) \Vdash 0 <= \underline{\mathsf{m}}][\mathrm{Nonnegative(N)} \stackrel{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\mathrm{Cauchy} \stackrel{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall \underline{(\mathrm{v1})} \colon \forall \underline{(\mathrm{v2})} \colon \forall \underline{\mathsf{n}} \colon \forall \underline{(\epsilon)} \colon \forall \underline{(\mathrm{fx})} \colon \forall_{\mathrm{obj}} \underline{(\epsilon)} \colon \dot{\neg}(\forall_{\mathrm{obj}} \underline{\mathsf{n}} \colon \dot{\neg}(\forall_{\mathrm{obj}} \underline{(\mathrm{v1})} \colon \forall_{\mathrm{obj}} \underline{(\mathrm{v2})} \colon \dot{\neg}(0 <= \underline{(\epsilon)} \Rightarrow \dot{\neg}(\dot{\neg}(0 = \underline{(\epsilon)})\mathrm{n})\mathrm{n})\mathrm{n} \Rightarrow \underline{\mathsf{n}} <= \underline{(\mathrm{v1})} \Rightarrow \underline{\mathsf{n}} <= \underline{(\mathrm{v2})} \Rightarrow \dot{\neg}(|(\underline{(\mathrm{fx})}[\underline{(\mathrm{v1})}] + (-\mathrm{u}\underline{(\mathrm{fx})}[\underline{(\mathrm{v2})}]))| <= \underline{(\epsilon)} \Rightarrow \dot{\neg}(\dot{\neg}(|(\underline{(\mathrm{fx})}[\underline{(\mathrm{v1})}] + (-\mathrm{u}\underline{(\mathrm{fx})}[\underline{(\mathrm{v2})}]))| = \underline{(\epsilon)})\mathrm{n})\mathrm{n})\mathrm{n})\mathrm{n})\mathrm{n}][\mathrm{Cauchy} \stackrel{\mathrm{proof}}{\to} \mathrm{Rule\ tactic}]$

$[\mathrm{JoinConjuncts(2conditions)} \stackrel{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \forall \underline{\mathsf{c}} \colon \forall \underline{\mathsf{d}} \colon \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}} \vdash \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{d}} \vdash \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \dot{\neg}(\underline{\mathsf{c}} \Rightarrow \dot{\neg}(\underline{\mathsf{d}})\mathrm{n})\mathrm{n}]$

$[\mathrm{JoinConjuncts(2conditions)} \stackrel{\mathrm{proof}}{\to} \lambda \mathsf{c}.\lambda \mathsf{x}.\mathcal{P}(\lceil \mathrm{SystemQ} \vdash \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \forall \underline{\mathsf{c}} \colon \forall \underline{\mathsf{d}} \colon \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}} \vdash \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{d}} \vdash \underline{\mathsf{a}} \vdash \underline{\mathsf{b}} \vdash \mathrm{MP2} \rhd \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}} \rhd \underline{\mathsf{a}} \rhd \underline{\mathsf{b}} \gg \underline{\mathsf{c}}; \mathrm{MP2} \rhd \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{d}} \rhd \underline{\mathsf{a}} \rhd \underline{\mathsf{b}} \gg \underline{\mathsf{d}}; \mathrm{JoinConjuncts} \rhd \underline{\mathsf{c}} \rhd \underline{\mathsf{d}} \gg \dot{\neg}(\underline{\mathsf{c}} \Rightarrow \dot{\neg}(\underline{\mathsf{d}})\mathrm{n})\mathrm{n}; \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \forall \underline{\mathsf{c}} \colon \forall \underline{\mathsf{d}} \colon \mathrm{Ded} \rhd \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \forall \underline{\mathsf{c}} \colon \forall \underline{\mathsf{d}} \colon \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}} \vdash \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{d}} \vdash \underline{\mathsf{a}} \vdash \underline{\mathsf{b}} \vdash \dot{\neg}(\underline{\mathsf{c}} \Rightarrow \dot{\neg}(\underline{\mathsf{d}})\mathrm{n})\mathrm{n} \gg \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}} \Rightarrow \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{d}} \Rightarrow \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \dot{\neg}(\underline{\mathsf{c}} \Rightarrow \dot{\neg}(\underline{\mathsf{d}})\mathrm{n})\mathrm{n}; \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}} \vdash \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{d}} \vdash \mathrm{MP2} \rhd \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}} \Rightarrow \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{d}} \Rightarrow \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \dot{\neg}(\underline{\mathsf{c}} \Rightarrow \dot{\neg}(\underline{\mathsf{d}})\mathrm{n})\mathrm{n} \rhd \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{c}} \rhd \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \underline{\mathsf{d}} \gg \underline{\mathsf{a}} \Rightarrow \underline{\mathsf{b}} \Rightarrow \dot{\neg}(\underline{\mathsf{c}} \Rightarrow \dot{\neg}(\underline{\mathsf{d}})\mathrm{n})\mathrm{n} \rceil, \mathrm{p}_0, \mathsf{c})]$

$[\mathrm{FromNegatedAnd} \stackrel{\mathrm{stmt}}{\to} \mathrm{SystemQ} \vdash \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\mathrm{n})\mathrm{n})\mathrm{n} \vdash \underline{\mathsf{a}} \vdash \dot{\neg}(\underline{\mathsf{b}})\mathrm{n}]$

$[\mathrm{FromNegatedAnd} \stackrel{\mathrm{proof}}{\to} \lambda \mathsf{c}.\lambda \mathsf{x}.\mathcal{P}(\lceil \mathrm{SystemQ} \vdash \forall \underline{\mathsf{a}} \colon \forall \underline{\mathsf{b}} \colon \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\mathrm{n})\mathrm{n})\mathrm{n} \vdash \underline{\mathsf{a}} \vdash$

$\text{Repetition} \rhd \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \gg \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n}; \text{RemoveDoubleNeg} \rhd \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \gg \underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\text{n}; \text{MP} \rhd \underline{\mathsf{a}} \Rightarrow \dot{\neg}(\underline{\mathsf{b}})\text{n} \rhd \underline{\mathsf{a}} \gg \dot{\neg}(\underline{\mathsf{b}})\text{n}\rceil, \text{p}_0, \mathsf{c})]$

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$[\text{ToNegatedOr} \overset{\text{stmt}}{\rightarrow} \text{SystemQ} \vdash \forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \vdash \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}})\text{n}]$

$[\text{ToNegatedOr} \overset{\text{proof}}{\rightarrow} \lambda\mathsf{c}.\lambda\mathsf{x}.\mathcal{P}(\lceil \text{SystemQ} \vdash \forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \vdash \dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}} \vdash \text{FirstConjunct} \rhd \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \gg \dot{\neg}(\underline{\mathsf{a}})\text{n}; \text{SecondConjunct} \rhd \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \gg \dot{\neg}(\underline{\mathsf{b}})\text{n}; \text{NegateDisjunct1} \rhd \dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}} \rhd \dot{\neg}(\underline{\mathsf{a}})\text{n} \gg \underline{\mathsf{b}}; \text{FromContradiction} \rhd \underline{\mathsf{b}} \rhd \dot{\neg}(\underline{\mathsf{b}})\text{n} \gg \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}})\text{n}; \forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \text{Ded} \rhd \forall\underline{\mathsf{a}}\colon \forall\underline{\mathsf{b}}\colon \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \vdash \dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}} \vdash \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}})\text{n} \gg \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \Rightarrow \dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}})\text{n}; \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \vdash \text{MP} \rhd \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \Rightarrow \dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}})\text{n} \rhd \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{b}})\text{n})\text{n})\text{n} \gg \dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}})\text{n}; \text{prop lemma imply negation} \rhd \dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}} \Rightarrow \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}})\text{n} \gg \dot{\neg}(\dot{\neg}(\underline{\mathsf{a}})\text{n} \Rightarrow \underline{\mathsf{b}})\text{n}\rceil, \text{p}_0, \mathsf{c})]$

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$[\text{NextXS(UpperBound)} \overset{\text{stmt}}{\rightarrow} \text{SystemQ} \vdash \forall\underline{\mathsf{m}}\colon \text{UB}(01//02 * *\text{xs}[\underline{\mathsf{m}}] + +\text{us}[\underline{\mathsf{m}}], \text{SetOfReals}) \vdash \text{xs}[(\underline{\mathsf{m}} + 1)] == \text{xs}[\underline{\mathsf{m}}]][\text{NextXS(UpperBound)} \overset{\text{proof}}{\rightarrow} \text{Rule tactic}]$

$[\text{NextXS(NoUpperBound)} \overset{\text{stmt}}{\rightarrow} \text{SystemQ} \vdash \forall\underline{\mathsf{m}}\colon \dot{\neg}(\text{UB}(01//02 * *\text{xs}[\underline{\mathsf{m}}] + +\text{us}[\underline{\mathsf{m}}], \text{SetOfReals}))\text{n} \vdash \text{xs}[(\underline{\mathsf{m}} + 1)] == 01//02 * *\text{xs}[\underline{\mathsf{m}}] + +\text{us}[\underline{\mathsf{m}}]][\text{NextXS(NoUpperBound)} \overset{\text{proof}}{\rightarrow} \text{Rule tactic}]$

$[\text{NextUS(UpperBound)} \overset{\text{stmt}}{\rightarrow} \text{SystemQ} \vdash \forall\underline{\mathsf{m}}\colon \text{UB}(01//02 * *\text{xs}[\underline{\mathsf{m}}] + +\text{us}[\underline{\mathsf{m}}], \text{SetOfReals}) \vdash \text{us}[(\underline{\mathsf{m}} + 1)] == 01//02 * *\text{xs}[\underline{\mathsf{m}}] + +\text{us}[\underline{\mathsf{m}}]][\text{NextUS(UpperBound)} \overset{\text{proof}}{\rightarrow} \text{Rule tactic}]$

$[\text{NextUS(NoUpperBound)} \overset{\text{stmt}}{\rightarrow} \text{SystemQ} \vdash \forall\underline{\mathsf{m}}\colon \dot{\neg}(\text{UB}(01//02 * *\text{xs}[\underline{\mathsf{m}}] + +\text{us}[\underline{\mathsf{m}}], \text{SetOfReals}))\text{n} \vdash \text{us}[(\underline{\mathsf{m}} + 1)] == \text{us}[\underline{\mathsf{m}}]][\text{NextUS(NoUpperBound)} \overset{\text{proof}}{\rightarrow} \text{Rule tactic}]$

$[\text{US0} \overset{\text{stmt}}{\rightarrow} \text{SystemQ} \vdash \text{us}[0] == \text{xs}[0] + +\text{R(1f)}][\text{US0} \overset{\text{proof}}{\rightarrow} \text{Rule tactic}]$

$[\text{ExpZero} \overset{\text{stmt}}{\rightarrow} \text{SystemQ} \vdash \forall\underline{\mathsf{m}}\colon \forall\underline{\mathsf{x}}\colon \underline{\mathsf{m}} = 0 \vdash \underline{\mathsf{x}}(\text{exp})\underline{\mathsf{m}} = 1][\text{ExpZero} \overset{\text{proof}}{\rightarrow} \text{Rule tactic}]$

$[\text{ExpPositive} \overset{\text{stmt}}{\rightarrow} \text{SystemQ} \vdash \forall\underline{\mathsf{m}}\colon \forall\underline{\mathsf{x}}\colon \dot{\neg}(0 <= \underline{\mathsf{m}} \Rightarrow \dot{\neg}(\dot{\neg}(0 = \underline{\mathsf{m}})\text{n})\text{n})\text{n} \vdash \underline{\mathsf{x}}(\text{exp})\underline{\mathsf{m}} = (\underline{\mathsf{x}} * \underline{\mathsf{x}}(\text{exp})(\underline{\mathsf{m}} + (-\text{u}1)))][\text{ExpPositive} \overset{\text{proof}}{\rightarrow} \text{Rule tactic}]$

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$[\text{BSzero} \overset{\text{stmt}}{\rightarrow} \text{SystemQ} \vdash \forall\underline{\mathsf{m}}\colon \forall\underline{\mathsf{n}}\colon \underline{\mathsf{n}} = 0 \vdash \text{BS}(\underline{\mathsf{m}}, \underline{\mathsf{n}}) = \text{rec}(1 + 1)(\text{exp})\underline{\mathsf{m}}][\text{BSzero} \overset{\text{proof}}{\rightarrow} \text{Rule tactic}]$

$[\text{BSpositive} \overset{\text{stmt}}{\rightarrow} \text{SystemQ} \vdash \forall\underline{\mathsf{m}}\colon \forall\underline{\mathsf{n}}\colon \dot{\neg}(0 <= \underline{\mathsf{n}} \Rightarrow \dot{\neg}(\dot{\neg}(0 = \underline{\mathsf{n}})\text{n})\text{n})\text{n} \vdash \text{BS}(\underline{\mathsf{m}}, \underline{\mathsf{n}}) = (\text{rec}(1 + 1)(\text{exp})(\underline{\mathsf{m}} + \underline{\mathsf{n}}) + \text{BS}(\underline{\mathsf{m}}, (\underline{\mathsf{n}} + (-\text{u}1))))][\text{BSpositive} \overset{\text{proof}}{\rightarrow} \text{Rule tactic}]$

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[UStelescope(Zero) $\overset{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{\mathsf{m}} \colon \forall \underline{\mathsf{n}} \colon \underline{\mathsf{n}} = 0 \vdash$ UStelescope($\underline{\mathsf{m}}, \underline{\mathsf{n}}$) = $|(\text{us}[\underline{\mathsf{m}}] + (-\text{uus}[(\underline{\mathsf{m}} + 1)]))|$][UStelescope(Zero) $\overset{\text{proof}}{\rightarrow}$ Rule tactic]
[UStelescope(Positive) $\overset{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{\mathsf{m}} \colon \forall \underline{\mathsf{n}} \colon \dot{\neg}(0 <= \underline{\mathsf{n}} \Rightarrow \dot{\neg}(\dot{\neg}(0 = \underline{\mathsf{n}})\text{n})\text{n})\text{n} \vdash$ UStelescope($\underline{\mathsf{m}}, \underline{\mathsf{n}}$) = $(|(\text{us}[(\underline{\mathsf{m}} + \underline{\mathsf{n}})] + (-\text{uus}[(\underline{\mathsf{m}} + (\underline{\mathsf{n}} + 1))]))| +$ UStelescope($\underline{\mathsf{m}}, (\underline{\mathsf{n}} + (-\text{u}1))$)))][UStelescope(Positive) $\overset{\text{proof}}{\rightarrow}$ Rule tactic]
[(x) $\overset{\text{macro}}{\rightarrow}$ $\lambda \mathsf{t}.\lambda \mathsf{s}.\lambda \mathsf{c}.\tilde{\mathcal{M}}_4(\mathsf{t}, \mathsf{s}, \mathsf{c}, \lceil[(\mathsf{x}) \ddot{=} (\mathsf{x})]\rceil)$]
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[EqAddition(R) $\overset{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(\text{fx})} \colon \forall \underline{(\text{fy})} \colon \forall \underline{(\text{fz})} \colon \text{R}(\underline{(\text{fx})}) = \text{R}(\underline{(\text{fy})}) \vdash \text{R}(\underline{(\text{fx})}) + +\text{R}(\underline{(\text{fz})}) = \text{R}(\underline{(\text{fy})}) + +\text{R}(\underline{(\text{fz})})$][EqAddition(R) $\overset{\text{proof}}{\rightarrow}$ Rule tactic]
[PlusCommutativity(R) $\overset{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(\text{fx})} \colon \forall \underline{(\text{fy})} \colon \text{R}(\underline{(\text{fx})}) + +\text{R}(\underline{(\text{fy})}) == \text{R}(\underline{(\text{fy})}) + +\text{R}(\underline{(\text{fx})})$][PlusCommutativity(R) $\overset{\text{proof}}{\rightarrow}$ Rule tactic]

[PlusAssociativity(R) $\overset{\text{stmt}}{\rightarrow}$ SystemQ $\vdash$ $\forall \underline{(\text{fx})} \colon \forall \underline{(\text{fy})} \colon \forall \underline{(\text{fz})} \colon \text{R}(\underline{(\text{fx})}) + +\text{R}(\underline{(\text{fy})}) + +\text{R}(\underline{(\text{fz})}) = \text{R}(\underline{(\text{fx})}) + +\text{R}(\underline{(\text{fy})}) + +\text{R}(\underline{(\text{fz})})$][PlusAssociativity(R) $\overset{\text{proof}}{\rightarrow}$ Rule tactic]
[PlusAssociativity(R)XX $\overset{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(\text{fx})} \colon \forall \underline{(\text{fy})} \colon \forall \underline{(\text{fz})} \colon \text{R}(\underline{(\text{fx})} +_{\text{f}} \underline{(\text{fy})} +_{\text{f}} \underline{(\text{fz})}) == \text{R}(\underline{(\text{fx})} +_{\text{f}} \underline{(\text{fy})} +_{\text{f}} \underline{(\text{fz})})$][PlusAssociativity(R)XX $\overset{\text{proof}}{\rightarrow}$ Rule tactic]
[Plus0(R) $\overset{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(\text{fx})} \colon \text{R}(\underline{(\text{fx})}) + +\text{R}(0\text{f}) == \text{R}(\underline{(\text{fx})})$][Plus0(R) $\overset{\text{proof}}{\rightarrow}$ Rule tactic]
[Negative(R) $\overset{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{\mathsf{m}} \colon \forall \underline{(\text{fx})} \colon \text{R}(\underline{(\text{fx})}) + +(- - \text{R}(\underline{(\text{fx})})) == \text{R}(0\text{f})$][Negative(R) $\overset{\text{proof}}{\rightarrow}$ Rule tactic]
[TimesAssociativity(R) $\overset{\text{stmt}}{\rightarrow}$ SystemQ $\vdash$ $\forall \underline{(\text{fx})} \colon \forall \underline{(\text{fy})} \colon \forall \underline{(\text{fz})} \colon \text{R}(\underline{(\text{fx})}) * *\text{R}(\underline{(\text{fy})}) * *\text{R}(\underline{(\text{fz})}) == \text{R}(\underline{(\text{fx})}) * *\text{R}(\underline{(\text{fy})}) * *\text{R}(\underline{(\text{fz})})$][TimesAssociativity(R) $\overset{\text{proof}}{\rightarrow}$ Rule tactic]
[Times1(R) $\overset{\text{stmt}}{\rightarrow}$ SystemQ $\vdash \forall \underline{(\text{fx})} \colon \text{R}(\underline{(\text{fx})}) * *\text{R}(1\text{f}) == \text{R}(\underline{(\text{fx})})$][Times1(R) $\overset{\text{proof}}{\rightarrow}$ Rule tactic]
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[kvanti $\overset{\text{prio}}{\rightarrow}$
Preassociative
[kvanti], [base], [bracket * end bracket], [big bracket * end bracket], [$ * $], [**flush left** [*]], [x], [y], [z], [[* ⋈ *]], [[* $\overset{*}{\rightarrow}$ *]], [pyk], [tex], [name], [prio], [*], [T], [if(*, *, *)], [[* $\overset{*}{\Rightarrow}$ *]], [val], [claim], [⊥], [f(*)], [$(*)^{\text{I}}$], [F], [$\underline{0}$], [$\underline{1}$], [$\underline{2}$], [$\underline{3}$], [$\underline{4}$], [$\underline{5}$], [$\underline{6}$], [$\underline{7}$], [$\underline{8}$], [$\underline{9}$], [0], [1], [2], [3], [4], [5], [6], [7], [8], [9], [a], [b], [c], [d], [e], [f], [g], [h], [i], [j], [k], [l], [m], [n], [o], [p], [q], [r], [s], [t], [u], [v], [w], [$(*)^{\text{M}}$], [If(*, *, *)], [array{*} * end array], [l], [c], [r], [empty], [$\langle * \mid * := * \rangle$], [$\mathcal{M}(*)$], [$\tilde{\mathcal{U}}(*)$], [$\mathcal{U}(*)$], [$\mathcal{U}^{\text{M}}(*)$], [**apply**(*, *)], [$\textbf{apply}_1(*, *)$], [identifier(*)], [$\text{identifier}_1(*, *)$], [array-plus(*, *)], [array-remove(*, *, *)], [array-put(*, *, *, *)], [array-add(*, *, *, *, *)], [bit(*, *)], [$\text{bit}_1(*, *)$], [rack], ["vector"], ["bibliography"], ["dictionary"],

["body"], ["codex"], ["expansion"], ["code"], ["cache"], ["diagnose"], ["pyk"], ["tex"], ["texname"], ["value"], ["message"], ["macro"], ["definition"], ["unpack"], ["claim"], ["priority"], ["lambda"], ["apply"], ["true"], ["if"], ["quote"], ["proclaim"], ["define"], ["introduce"], ["hide"], ["pre"], ["post"], [$\mathcal{E}(*,*,*)$], [$\mathcal{E}_2(*,*,*,*,*)$], [$\mathcal{E}_3(*,*,*,*)$], [$\mathcal{E}_4(*,*,*,*)$], [**lookup**$(*,*,*)$], [**abstract**$(*,*,*,*)$], [$\lceil *\rceil$], [$\mathcal{M}(*,*,*)$], [$\mathcal{M}_2(*,*,*,*)$], [$\mathcal{M}^*(*,*,*)$], [macro], [s_0], [**zip**$(*,*)$], [**assoc**$_1(*,*,*)$], [$(*)^{\mathbf{P}}$], [self], [[$* \stackrel{..}{=} *$]], [[$* \doteq *$]], [[$* \acute{\doteq} *$]], [[$* \stackrel{\text{pyk}}{=} *$]], [[$* \stackrel{\text{tex}}{=} *$]], [[$* \stackrel{\text{name}}{=} *$]], [**Priority table**$[*]$], [$\tilde{\mathcal{M}}_1$], [$\tilde{\mathcal{M}}_2(*)$], [$\tilde{\mathcal{M}}_3(*)$], [$\tilde{\mathcal{M}}_4(*,*,*,*)$], [$\tilde{\mathcal{M}}(*,*,*)$], [$\tilde{\mathcal{Q}}(*,*,*)$], [$\tilde{\mathcal{Q}}_2(*,*,*)$], [$\tilde{\mathcal{Q}}_3(*,*,*,*)$], [$\tilde{\mathcal{Q}}^*(*,*,*)$], [$(*)$], [$(*)$], [display$(*)$], [statement$(*)$], [$[*]^{\cdot}$], [$[*]^{-}$], [**aspect**$(*,*)$], [**aspect**$(*,*,*)$], [$\langle * \rangle$], [**tuple**$_1(*)$], [**tuple**$_2(*)$], [let$_2(*,*)$], [let$_1(*,*)$], [[$* \stackrel{\text{claim}}{=} *$]], [checker], [**check**$(*,*)$], [**check**$_2(*,*,*)$], [**check**$_3(*,*,*)$], [**check**$^*(*,*)$], [**check**$^*_2(*,*,*)$], [$[*]^{\cdot}$], [$[*]^{-}$], [$[*]^{\circ}$], [msg], [[$* \stackrel{\text{msg}}{=} *$]], [<stmt>], [stmt], [[$* \stackrel{\text{stmt}}{=} *$]], [HeadNil′], [HeadPair′], [Transitivity′], [$\perp\!\!\!\perp$], [Contra′], [T'_{E}], [L_1], [$\underline{*}$], [$\mathcal{A}$], [$\mathcal{B}$], [$\mathcal{C}$], [$\mathcal{D}$], [$\mathcal{E}$], [$\mathcal{F}$], [$\mathcal{G}$], [$\mathcal{H}$], [$\mathcal{I}$], [$\mathcal{J}$], [$\mathcal{K}$], [$\mathcal{L}$], [$\mathcal{M}$], [$\mathcal{N}$], [$\mathcal{O}$], [$\mathcal{P}$], [$\mathcal{Q}$], [$\mathcal{R}$], [$\mathcal{S}$], [$\mathcal{T}$], [$\mathcal{U}$], [$\mathcal{V}$], [$\mathcal{W}$], [$\mathcal{X}$], [$\mathcal{Y}$], [$\mathcal{Z}$], [$\langle * \mid * := * \rangle$], [$\langle^* * \mid * := * \rangle$], [$\emptyset$], [Remainder], [$(*)^{\mathbf{V}}$], [intro$(*,*,*,*)$], [intro$(*,*,*)$], [error$(*,*)$], [error$_2(*,*)$], [proof$(*,*,*)$], [proof$_2(*,*)$], [$\mathcal{S}(*,*)$], [$\mathcal{S}^{\mathrm{I}}(*,*)$], [$\mathcal{S}^{\rhd}(*,*)$], [$\mathcal{S}^{\rhd}_1(*,*,*)$], [$\mathcal{S}^{\mathrm{E}}(*,*)$], [$\mathcal{S}^{\mathrm{E}}_1(*,*,*)$], [$\mathcal{S}^{+}(*,*)$], [$\mathcal{S}^{+}_1(*,*,*)$], [$\mathcal{S}^{-}(*,*)$], [$\mathcal{S}^{-}_1(*,*,*)$], [$\mathcal{S}^{*}(*,*)$], [$\mathcal{S}^{*}_1(*,*,*)$], [$\mathcal{S}^{*}_2(*,*,*,*)$], [$\mathcal{S}^{@}(*,*)$], [$\mathcal{S}^{@}_1(*,*,*)$], [$\mathcal{S}^{\vdash}(*,*)$], [$\mathcal{S}^{\vdash}_1(*,*,*,*)$], [$\mathcal{S}^{\Vdash}(*,*)$], [$\mathcal{S}^{\Vdash}_1(*,*,*,*)$], [$\mathcal{S}^{\text{i.e.}}(*,*)$], [$\mathcal{S}^{\text{i.e.}}_1(*,*,*,*)$], [$\mathcal{S}^{\text{i.e.}}_2(*,*,*,*,*)$], [$\mathcal{S}^{\forall}(*,*)$], [$\mathcal{S}^{\forall}_1(*,*,*,*)$], [$\mathcal{S}^{;}(*,*)$], [$\mathcal{S}^{;}_1(*,*,*)$], [$\mathcal{S}^{;}_2(*,*,*,*)$], [$\mathcal{T}(*)$], [claims$(*,*,*)$], [claims$_2(*,*,*)$], [<proof>], [proof], [[**Lemma** $*: *$]], [[**Proof of** $*: *$]], [[$*$ **lemma** $*: *$]], [[$*$ **antilemma** $*: *$]], [[$*$ **rule** $*: *$]], [[$*$ **antirule** $*: *$]], [verifier], [$\mathcal{V}_1(*)$], [$\mathcal{V}_2(*,*)$], [$\mathcal{V}_3(*,*,*,*)$], [$\mathcal{V}_4(*,*)$], [$\mathcal{V}_5(*,*,*,*)$], [$\mathcal{V}_6(*,*,*,*)$], [$\mathcal{V}_7(*,*,*,*)$], [Cut$(*,*)$], [Head$_{\oplus}(*)$], [Tail$_{\oplus}(*)$], [rule$_1(*,*)$], [rule$(*,*)$], [Rule tactic], [Plus$(*,*)$], [[**Theory** $*$]], [theory$_2(*,*)$], [theory$_3(*,*)$], [theory$_4(*,*,*)$], [HeadNil″], [HeadPair″], [Transitivity″], [Contra″], [HeadNil], [HeadPair], [Transitivity], [Contra], [T_{E}], [ragged right], [ragged right expansion], [parm$(*,*,*)$], [parm$^*(*,*,*)$], [inst$(*,*)$], [inst$^*(*,*)$], [occur$(*,*,*)$], [occur$^*(*,*,*)$], [unify$(* = *,*)$], [unify$^*(* = *,*)$], [unify$_2(* = *,*)$], [L_{a}], [L_{b}], [L_{c}], [L_{d}], [L_{e}], [L_{f}], [L_{g}], [L_{h}], [L_{i}], [L_{j}], [L_{k}], [L_{l}], [L_{m}], [L_{n}], [L_{o}], [L_{p}], [L_{q}], [L_{r}], [L_{s}], [L_{t}], [L_{u}], [L_{v}], [L_{w}], [L_{x}], [L_{y}], [L_{z}], [L_{A}], [L_{B}], [L_{C}], [L_{D}], [L_{E}], [L_{F}], [L_{G}], [L_{H}], [L_{I}], [L_{J}], [L_{K}], [L_{L}], [L_{M}], [L_{N}], [L_{O}], [L_{P}], [L_{Q}], [L_{R}], [L_{S}], [L_{T}], [L_{U}], [L_{V}], [L_{W}], [L_{X}], [L_{Y}], [L_{Z}], [$\mathrm{L}_{?}$], [Reflexivity], [Reflexivity$_1$], [Commutativity], [Commutativity$_1$], [<tactic>], [tactic], [[$* \stackrel{\text{tactic}}{=} *$]], [$\mathcal{P}(*,*,*)$], [$\mathcal{P}^*(*,*,*)$], [$\mathrm{p}_0$], [conclude$_1(*,*)$], [conclude$_2(*,*,*)$], [conclude$_3(*,*,*,*)$], [conclude$_4(*,*)$], [check], [[$* \stackrel{\circ}{=} *$]], [RootVisible$(*)$], [A], [R], [C], [T], [L], [$\{*\}$], [$\overline{*}$], [a], [b], [c], [d], [e], [f], [g], [h], [i], [j], [k], [l], [m], [n], [o], [p], [q], [r], [s], [t], [u], [v], [w], [x], [y], [z], [$\langle * \equiv * \mid * := * \rangle$], [$\langle * \equiv^0 * \mid * := * \rangle$], [$\langle * \equiv^1 * \mid * := * \rangle$], [$\langle * \equiv^* * \mid * := * \rangle$], [Ded$(*,*)$], [Ded$_0(*,*)$], [Ded$_1(*,*,*)$], [Ded$_2(*,*,*)$], [Ded$_3(*,*,*,*)$], [Ded$_4(*,*,*,*)$], [Ded$^*_4(*,*,*,*)$], [Ded$_5(*,*,*)$], [Ded$_6(*,*,*,*)$], [Ded$^*_6(*,*,*,*)$], [Ded$_7(*)$], [Ded$_8(*,*)$], [Ded$^*_8(*,*)$], [S], [Neg], [MP], [Gen], [Ded], [S1], [S2], [S3], [S4], [S5], [S6], [S7], [S8], [S9], [Repetition], [A1′], [A2′], [A4′], [A5′], [Prop 3.2a], [Prop 3.2b], [Prop 3.2c], [Prop 3.2d], [Prop 3.2e_1], [Prop 3.2e_2], [Prop 3.2e], [Prop 3.2f_1], [Prop 3.2f_2], [Prop 3.2f], [Prop 3.2g_1], [Prop 3.2g_2], [Prop 3.2g], [Prop 3.2h_1], [Prop 3.2h_2], [Prop 3.2h], [$\text{Block}_1(*, *, *)$], [$\text{Block}_2(*)$], [UniqueMember], [UniqueMember(Type)], [SameSeries], [A4], [SameMember], [Qclosed(Addition)], [Qclosed(Multiplication)], [FromCartProd(1)], [1rule fromCartProd(2)], [constantRationalSeries(∗)], [cartProd(∗)], [Power(∗)], [binaryUnion(∗, ∗)], [SetOfRationalSeries], [IsSubset(∗, ∗)], [(p∗, ∗)], [(s∗)], [$(\cdots)$], [`Objekt-var`], [`Ex-var`], [`Ph-var`], [`Værdi`], [`Variabel`], [Op(∗)], [Op(∗, ∗)], [$* \ddot{==} *$], [ContainsEmpty(∗)], [Nat(∗)], [Dedu(∗, ∗)], [$\text{Dedu}_0(*, *)$], [$\text{Dedu}_\text{s}(*, *, *)$], [$\text{Dedu}_1(*, *, *)$], [$\text{Dedu}_2(*, *, *)$], [$\text{Dedu}_3(*, *, *, *)$], [$\text{Dedu}_4(*, *, *, *)$], [$\text{Dedu}^*_4(*, *, *, *)$], [$\text{Dedu}_5(*, *, *)$], [$\text{Dedu}_6(*, *, *, *)$], [$\text{Dedu}^*_6(*, *, *, *)$], [$\text{Dedu}_7(*)$], [$\text{Dedu}_8(*, *)$], [$\text{Dedu}^*_8(*, *)$], [$\text{Ex}_1$], [$\text{Ex}_2$], [Ex3], [$\text{Ex}_{10}$], [$\text{Ex}_{20}$], [$*_\text{Ex}$], [$*^\text{Ex}$], [$\langle * \equiv * \mid * := = = * \rangle_\text{Ex}$], [$\langle * \equiv^0 * \mid * := = = * \rangle_\text{Ex}$], [$\langle * \equiv^1 * \mid * := = = * \rangle_\text{Ex}$], [$\langle * \equiv^* * \mid * := = = * \rangle_\text{Ex}$], [$\text{ph}_1$], [$\text{ph}_2$], [$\text{ph}_3$], [$*_\text{Ph}$], [$*^\text{Ph}$], [$\langle * \equiv * \mid * := = = * \rangle_\text{Ph}$], [$\langle * \equiv^0 * \mid * := = = * \rangle_\text{Ph}$], [$\langle * \equiv^1 * \mid * := = = * \rangle_\text{Ph}$], [$\langle * \equiv^* * \mid * := = = * \rangle_\text{Ph}$], [$\langle * \equiv * \mid * := = = * \rangle_\text{Me}$], [$\langle * \equiv^1 * \mid * := = = * \rangle_\text{Me}$], [$\langle * \equiv^* * \mid * := = = * \rangle_\text{Me}$], [bs], [OBS], [$\mathcal{BS}$], [∅], [SystemQ], [MP], [Gen], [Repetition], [Neg], [Ded], [ExistIntro], [Extensionality], [∅def], [PairDef], [UnionDef], [PowerDef], [SeparationDef], [AddDoubleNeg], [RemoveDoubleNeg], [AndCommutativity], [AutoImply], [Contrapositive], [FirstConjunct], [SecondConjunct], [FromContradiction], [FromDisjuncts], [IffCommutativity], [IffFirst], [IffSecond], [ImplyTransitivity], [JoinConjuncts], [MP2], [MP3], [MP4], [MP5], [MT], [NegativeMT], [Technicality], [Weakening], [WeakenOr1], [WeakenOr2], [Formula2Pair], [Pair2Formula], [Formula2Union], [Union2Formula], [Formula2Sep], [Sep2Formula], [Formula2Power], [SubsetInPower], [HelperPowerIsSub], [PowerIsSub], [(Switch)HelperPowerIsSub], [(Switch)PowerIsSub], [ToSetEquality], [HelperToSetEquality(t)], [ToSetEquality(t)], [HelperFromSetEquality], [FromSetEquality], [HelperReflexivity], [Reflexivity], [HelperSymmetry], [Symmetry], [HelperTransitivity], [Transitivity], [ERisReflexive], [ERisSymmetric], [ERisTransitive], [∅isSubset], [HelperMemberNot∅], [MemberNot∅], [HelperUnique∅], [Unique∅], [==Reflexivity], [==Symmetry], [Helper==Transitivity], [==Transitivity], [HelperTransferNotEq], [TransferNotEq], [HelperPairSubset], [Helper(2)PairSubset], [PairSubset], [SamePair], [SameSingleton], [UnionSubset], [SameUnion], [SeparationSubset], [SameSeparation], [SameBinaryUnion], [IntersectionSubset], [SameIntersection], [AutoMember], [HelperEqSysNot∅], [EqSysNot∅], [HelperEqSubset], [EqSubset], [HelperEqNecessary], [EqNecessary], [HelperNoneEqNecessary], [Helper(2)NoneEqNecessary], [NoneEqNecessary], [EqClassIsSubset], [EqClassesAreDisjoint], [AllDisjoint], [AllDisjointImply], [BSsubset], [Union(BS/R)subset], [UnionIdentity], [EqSysIsPartition], [(x1)], [(x2)], [(y1)], [(y2)], [(v1)], [(v2)], [(v3)], [(v4)], [(v2n)], [(m1)], [(m2)], [(n1)], [(n2)], [(n3)], [(ϵ)], [$(\epsilon)_1$], [(ϵ2)], [(fep)], [(fx)], [(fy)], [(fz)], [(fu)], [(fv)], [(fw)], [(rx)], [(ry)], [(rz)], [(ru)], [(sx)], [(sx1)], [(sy)], [(sy1)], [(sz)], [(sz1)], [(su)], [(su1)], [(fxs)], [(fys)], [(crs1)], [(f1)], [(f2)], [(f3)], [(f4)], [(op1)], [(op2)], [(r1)], [(s1)], [(s2)], [X_1], [X_2], [Y_1], [Y_2], [V_1], [V_2], [V_3], [V_4], [V_{2n}], [M_1], [M_2], [N_1], [N_2], [N_3], [ϵ], [ϵ1], [ϵ2],

[FX], [FY], [FZ], [FU], [FV], [FW], [FEP], [RX], [RY], [RZ], [RU], [(SX)], [(SX1)],
[(SY)], [(SY1)], [(SZ)], [(SZ1)], [(SU)], [(SU1)], [FXS], [FYS], [(F1)], [(F2)], [(F3)],
[(F4)], [(OP1)], [(OP2)], [(R1)], [(S1)], [(S2)], [(EPob)], [(CRS1ob)], [(F1ob)],
[(F2ob)], [(F3ob)], [(F4ob)], [(N1ob)], [(N2ob)], [(OP1ob)], [(OP2ob)], [(R1ob)],
[(S1ob)], [(S2ob)], [ph_4], [ph_5], [ph_6], [NAT], [RATIONAL$_S$ERIES], [SERIES],
[SetOfReals], [SetOfFxs], [N], [Q], [X], [xs], [xaF], [ysF], [us], [usFoelge], [0], [1],
[(-1)], [2], [3], [1/2], [1/3], [2/3], [0f], [1f], [00], [01], [$(--01)$], [02], [01//02],
[PlusAssociativity(R)], [PlusAssociativity(R)XX], [Plus0(R)], [Negative(R)],
[Times1(R)], [lessAddition(R)], [PlusCommutativity(R)],
[LeqAntisymmetry(R)], [LeqTransitivity(R)], [leqAddition(R)],
[Distribution(R)], [A4(Axiom)], [InductionAxiom], [EqualityAxiom],
[EqLeqAxiom], [EqAdditionAxiom], [EqMultiplicationAxiom],
[QisClosed(Reciprocal)(Imply)], [QisClosed(Reciprocal)],
[QisClosed(Negative)(Imply)], [QisClosed(Negative)], [leqReflexivity],
[leqAntisymmetryAxiom], [leqTransitivityAxiom], [leqTotality],
[leqAdditionAxiom], [leqMultiplicationAxiom], [plusAssociativity],
[plusCommutativity], [Negative], [plus0], [timesAssociativity],
[timesCommutativity], [ReciprocalAxiom], [times1], [Distribution], [0not1],
[lemma eqLeq(R)], [TimesAssociativity(R)], [TimesCommutativity(R)],
[(Adgic)SameR], [Separation2formula(1)], [Separation2formula(2)], [Cauchy],
[PlusF], [ReciprocalF], [From ==], [To ==], [FromInR], [PlusR(Sym)],
[ReciprocalR(Axiom)], [LessMinus1(N)], [Nonnegative(N)], [US0],
[NextXS(UpperBound)], [NextXS(NoUpperBound)], [NextUS(UpperBound)],
[NextUS(NoUpperBound)], [ExpZero], [ExpPositive], [ExpZero(R)],
[ExpPositive(R)], [BSzero], [BSpositive], [UStelescope(Zero)],
[UStelescope(Positive)], [EqAddition(R)], [FromLimit], [ToUpperBound],
[FromUpperBound], [USisUpperBound], [0not1(R)], [ExpUnbounded(R)],
[FromLeq(Advanced)(N)], [FromLeastUpperBound], [ToLeastUpperBound],
[XSisNotUpperBound], [ysFGreater], [ysFLess], [SmallInverse], [NatType],
[RationalType], [SeriesType], [Max], [Numerical], [NumericalF],
[MemberOfSeries(Imply)], [JoinConjuncts(2conditions)],
[prop lemma imply negation], [TND], [FromNegatedImply], [ToNegatedImply],
[FromNegated($2*$Imply)], [FromNegatedAnd], [FromNegatedOr],
[ToNegatedOr], [FromNegations], [From3Disjuncts], [From$2*2$Disjuncts],
[NegateDisjunct1], [NegateDisjunct2], [ExpandDisjuncts], [SENC1], [SENC2],
[LessLeq(R)], [MemberOfSeries], [memberOfSeries(Type)];

Preassociative

[$*_{\{*\}}$], [$*$/indexintro($*,*,*,*$)], [$*$/intro($*,*,*$)], [$*$/bothintro($*,*,*,*,*$)],
[$*$/nameintro($*,*,*,*$)], [$*'$], [$*[*]$], [$*[*\rightarrow*]$], [$*[*\Rightarrow*]$], [$*0$], [$*1$], [0b], [$*$-color($*$)],
[$*$-color*($*$)], [$*^{\mathrm{H}}$], [$*^{\mathrm{T}}$], [$*^{\mathrm{U}}$], [$*^{\mathrm{h}}$], [$*^{\mathrm{t}}$], [$*^{\mathrm{s}}$], [$*^{\mathrm{c}}$], [$*^{\mathrm{d}}$], [$*^{\mathrm{a}}$], [$*^{\mathrm{C}}$], [$*^{\mathrm{M}}$], [$*^{\mathrm{B}}$], [$*^{\mathrm{r}}$], [$*^{\mathrm{i}}$],
[$*^{\mathrm{d}}$], [$*^{\mathrm{R}}$], [$*^{0}$], [$*^{1}$], [$*^{2}$], [$*^{3}$], [$*^{4}$], [$*^{5}$], [$*^{6}$], [$*^{7}$], [$*^{8}$], [$*^{9}$], [$*^{\mathrm{E}}$], [$*^{\mathcal{V}}$], [$*^{\mathcal{C}}$], [$*^{\mathcal{C}^*}$],
[$*^{\mathrm{hide}}$];

Preassociative

[“ $*$ ”], [], [$(*)^{\mathbf{t}}$], [string($*$) + $*$], [string($*$) ++ $*$], [
$*$], [$*$], [!$*$], ["$*$], [#$*$], [$\$*$], [%$*$], [&$*$], [’$*$], [($*$], [)$*$], [$**$], [+$*$], [,$*$], [-$*$], [.$*$], [/$*$],
[0$*$], [1$*$], [2$*$], [3$*$], [4$*$], [5$*$], [6$*$], [7$*$], [8$*$], [9$*$], [:$*$], [;$*$], [<$*$], [=$*$], [>$*$], [?$*$],

[@∗], [A∗], [B∗], [C∗], [D∗], [E∗], [F∗], [G∗], [H∗], [I∗], [J∗], [K∗], [L∗], [M∗], [N∗], [O∗], [P∗], [Q∗], [R∗], [S∗], [T∗], [U∗], [V∗], [W∗], [X∗], [Y∗], [Z∗], [[∗], [\∗], []∗], [^∗], [_∗], [‘∗], [a∗], [b∗], [c∗], [d∗], [e∗], [f∗], [g∗], [h∗], [i∗], [j∗], [k∗], [l∗], [m∗], [n∗], [o∗], [p∗], [q∗], [r∗], [s∗], [t∗], [u∗], [v∗], [w∗], [x∗], [y∗], [z∗], [{∗], [|∗], [}∗], [~∗], [**Preassociative** ∗; ∗], [**Postassociative** ∗; ∗], [[∗], ∗], [priority ∗ end], [newline ∗], [macro newline ∗], [MacroIndent(∗)];

Preassociative

[∗ ’ ∗], [∗ ‘ ∗];

Preassociative

[∗(exp)∗];

Preassociative

$[*']$, [R(∗)], $[- -$ R(∗)], [rec∗];

Preassociative

$[*/*], [* \cap *], [*[*]]$;

Preassociative

$[\cup *], [* \cup *]$, [P(∗)];

Preassociative

$[\{*\}]$, [StateExpand(∗, ∗, ∗)], [extractSeries(∗)], [SetOfSeries(∗)], $[- -$ Macro(∗)], [ExpandList(∗, ∗, ∗)], $[* *$ Macro(∗)], $[+ +$ Macro(∗)], [<< Macro(∗)], [||Macro(∗)], [01//Macro(∗)], [UB(∗, ∗)], [LUB(∗, ∗)], [BS(∗, ∗)], [UStelescope(∗, ∗)], [(∗)], [|f ∗ |], [|r ∗ |], [Limit(∗, ∗)], [Union(∗)], [IsOrderedPair(∗, ∗, ∗)], [IsRelation(∗, ∗, ∗)], [isFunction(∗, ∗, ∗)], [IsSeries(∗, ∗)], [IsNatural(∗, ∗)], [OrderedPair(∗, ∗)], [TypeNat(∗)], [TypeNat0(∗)], [TypeRational(∗)], [TypeRational0(∗)], [TypeSeries(∗, ∗)], [Typeseries0(∗, ∗)];

Preassociative

$[\{*, *\}], [\langle *, * \rangle]$, [(−u∗)], $[-_{\mathrm{f}} *]$, $[(- - *)]$, [1f/∗], [01//temp∗];

Preassociative

[∗(∗, ∗)], [ReflRel(∗, ∗)], [SymRel(∗, ∗)], [TransRel(∗, ∗)], [EqRel(∗, ∗)], $[[* \in *]_*]$, [Partition(∗, ∗)];

Preassociative

$[* \cdot *], [* \cdot_0 *], [(* * *)], [* *_{\mathrm{f}} *], [* * **]$;

Preassociative

$[* + *], [* +_0 *], [* +_1 *], [* - *], [* -_0 *], [* -_1 *], [(* + *)], [(* - *)], [* +_{\mathrm{f}} *]$, $[* -_{\mathrm{f}} *], [* + +*]$, [R(∗) − −R(∗)];

Preassociative

$[* \in *]$;

Preassociative

$[| * |]$, [if(∗, ∗, ∗)], [Max(∗, ∗)], [Max(∗, ∗)];

Preassociative

$[* = *], [* \neq *], [* <= *], [* < *], [* <_{\mathrm{f}} *], [* \leq_{\mathrm{f}} *]$, [SF(∗, ∗)], $[* == *]$, $[*!! == *], [* << *], [* <<== *]$;

Preassociative

$[* \cup \{*\}], [* \cup *], [* \backslash \{*\}]$;

Postassociative

$[* \therefore *], [* \underline{\therefore} *], [* \underline{::} *], [* \underline{+2*} *], [* :: *], [* +2* *]$;

Postassociative

$[*,*];$

Preassociative

$[* \stackrel{B}{\approx} *], [* \stackrel{D}{\approx} *], [* \stackrel{C}{\approx} *], [* \stackrel{P}{\approx} *], [* \approx *], [* = *], [* \stackrel{+}{\to} *], [* \stackrel{t}{=} *], [* \stackrel{t^*}{=} *], [* \stackrel{r}{=} *],$
$[* \in_t *], [* \subseteq_T *], [* \stackrel{T}{=} *], [* \stackrel{s}{=} *], [* \text{ free in } *], [* \text{ free in}^* *], [* \text{ free for } * \text{ in } *],$
$[* \text{ free for}^* * \text{ in } *], [* \in_c *], [* < *], [* <' *], [* \leq' *], [* = *], [* \neq *], [*^{\text{var}}],$
$[*\#^0*], [*\#^1*], [*\#^**], [*{=}{=}*], [* \subseteq *];$

Preassociative

$[\neg *], [\dot{\neg}\,(*)\text{n}], [* \notin *], [* \neq *];$

Preassociative

$[* \wedge *], [* \ddot{\wedge} *], [* \tilde{\wedge} *], [* \wedge_c *], [* \dot{\wedge} *];$

Preassociative

$[* \vee *], [* \parallel *], [* \ddot{\vee} *];$

Postassociative

$[* \dot{\vee} *];$

Preassociative

$[\exists *\colon *], [\forall *\colon *], [\forall_{\text{obj}} *\colon *], [\exists *\colon *];$

Postassociative

$[* \ddot{\Rightarrow} *], [* \Rightarrow *], [* \Leftrightarrow *], [* \dot{\Leftrightarrow} *];$

Preassociative

$[\{\text{ph} \in * \mid *\}];$

Postassociative

$[* : *], [* \text{ spy } *], [*!*];$

Preassociative

$[* \begin{cases} * \\ * \end{cases}];$

Preassociative

$[\lambda * .*], [\Lambda * .*], [\Lambda *], [\textbf{if } * \textbf{ then } * \textbf{ else } *], [\textbf{let } * = * \textbf{ in } *], [\textbf{let } * \ddot{=} * \text{ in } *];$

Preassociative

$[*\#*];$

Preassociative

$[*^{\text{I}}], [*^{\triangleright}], [*^{\text{V}}], [*^{+}], [*^{-}], [*^{*}];$

Preassociative

$[* @ *], [* \triangleright *], [* \mathrel{\triangleright\!\!\!>} *], [* \gg *], [* \trianglerighteq *];$

Postassociative

$[* \vdash *], [* \Vdash *], [* \text{ i.e. } *];$

Preassociative

$[\forall *\colon *], [\Pi *\colon *];$

Postassociative

$[* \oplus *];$

Postassociative

$[*; *];$

Preassociative

$[* \text{ proves } *];$

Preassociative

$[* \textbf{ proof of } * : *], [\text{Line } * : * \gg *; *], [\text{Last line } * \gg * \square],$

[Line $*$: Premise $\gg *; *$], [Line $*$: Side-condition $\gg *; *$], [Arbitrary $\gg *; *$],
[Local $\gg * = *; *$], [Begin $*; *$: End; $*$], [Last block line $* \gg *$;],
[Arbitrary $\gg *; *$];
Postassociative
[$* \mid *$];
Postassociative
[$*$, $*$], [$*[*]*$];
Preassociative
[$*\&*$];
Preassociative
[$*\backslash\backslash*$], [$*$ linebreak[4] $*$], [$*\backslash\backslash*$];]

A Pyk definitioner

[UniqueMember $\stackrel{\text{pyk}}{\rightarrow}$ "lemma uniqueMember"]

[UniqueMember(Type) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma uniqueMember(Type)"]

[SameSeries $\stackrel{\text{pyk}}{\rightarrow}$ "lemma sameSeries"]

[A4 $\stackrel{\text{pyk}}{\rightarrow}$ "lemma a4"]

[SameMember $\stackrel{\text{pyk}}{\rightarrow}$ "lemma sameMember"]

[Qclosed(Addition) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule Qclosed(Addition)"]

[Qclosed(Multiplication) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule Qclosed(Multiplication)"]

[FromCartProd(1) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule fromCartProd(1)"]

[1rule fromCartProd(2) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule fromCartProd(2)"]

[constantRationalSeries($*$) $\stackrel{\text{pyk}}{\rightarrow}$ "constantRationalSeries(")"]

[cartProd($*$) $\stackrel{\text{pyk}}{\rightarrow}$ "cartProd(" , ")"]

[Power($*$) $\stackrel{\text{pyk}}{\rightarrow}$ "P(")"]

[binaryUnion($*, *$) $\stackrel{\text{pyk}}{\rightarrow}$ "binaryUnion(" , ")"]

[SetOfRationalSeries $\stackrel{\text{pyk}}{\rightarrow}$ "setOfRationalSeries"]

[IsSubset($*, *$) $\stackrel{\text{pyk}}{\rightarrow}$ "isSubset(" , ")"]

[(p$*, *$) $\stackrel{\text{pyk}}{\rightarrow}$ "(p " , ")"]

[(s$*$) $\stackrel{\text{pyk}}{\rightarrow}$ "(s ")"]

[$(\cdots)$ $\stackrel{\text{pyk}}{\rightarrow}$ "cdots"]

[`Objekt-var` $\stackrel{\text{pyk}}{\rightarrow}$ "object-var"]

[`Ex-var` $\stackrel{\text{pyk}}{\rightarrow}$ "ex-var"]

[`Ph-var` $\stackrel{\text{pyk}}{\rightarrow}$ "ph-var"]

[`Værdi` $\stackrel{\text{pyk}}{\rightarrow}$ "vaerdi"]

[`Variabel` $\stackrel{\text{pyk}}{\rightarrow}$ "variabel"]

[Op($*$) $\stackrel{\text{pyk}}{\rightarrow}$ "op " end op"]

[$\mathrm{Op}(*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “op2 " comma " end op2”]

[$* \mathrel{\ddot{=}\!=} * \stackrel{\mathrm{pyk}}{\rightarrow}$ “define-equal " comma " end equal”]

[$\mathrm{ContainsEmpty}(*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “contains-empty " end empty”]

[$\mathrm{Nat}(*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “Nat(")”]

[$\mathrm{Dedu}(*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction " conclude " end 1deduction”]

[$\mathrm{Dedu}_0(*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction zero " conclude " end 1deduction”]

[$\mathrm{Dedu}_\mathrm{s}(*,*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction side " conclude " condition " end 1deduction”]

[$\mathrm{Dedu}_1(*,*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction one " conclude " condition " end 1deduction”]

[$\mathrm{Dedu}_2(*,*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction two " conclude " condition " end 1deduction”]

[$\mathrm{Dedu}_3(*,*,*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction three " conclude " condition " bound " end 1deduction”]

[$\mathrm{Dedu}_4(*,*,*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction four " conclude " condition " bound " end 1deduction”]

[$\mathrm{Dedu}_4^*(*,*,*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction four star " conclude " condition " bound " end 1deduction”]

[$\mathrm{Dedu}_5(*,*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction five " condition " bound " end 1deduction”]

[$\mathrm{Dedu}_6(*,*,*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction six " conclude " exception " bound " end 1deduction”]

[$\mathrm{Dedu}_6^*(*,*,*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction six star " conclude " exception " bound " end 1deduction”]

[$\mathrm{Dedu}_7(*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction seven " end 1deduction”]

[$\mathrm{Dedu}_8(*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction eight " bound " end 1deduction”]

[$\mathrm{Dedu}_8^*(*,*) \stackrel{\mathrm{pyk}}{\rightarrow}$ “1deduction eight star " bound " end 1deduction”]

[$\mathrm{Ex}_1 \stackrel{\mathrm{pyk}}{\rightarrow}$ “ex1”]

[$\mathrm{Ex}_2 \stackrel{\mathrm{pyk}}{\rightarrow}$ “ex2”]

[$\mathrm{Ex3} \stackrel{\mathrm{pyk}}{\rightarrow}$ “ex3”]

[$\mathrm{Ex}_{10} \stackrel{\mathrm{pyk}}{\rightarrow}$ “ex10”]

[$\mathrm{Ex}_{20} \stackrel{\mathrm{pyk}}{\rightarrow}$ “ex20”]

[$*_{\mathrm{Ex}} \stackrel{\mathrm{pyk}}{\rightarrow}$ “existential var " end var”]

[$*^{\mathrm{Ex}} \stackrel{\mathrm{pyk}}{\rightarrow}$ “" is existential var”]

[$\langle * \equiv * \,|\, * := = * \rangle_{\mathrm{Ex}} \stackrel{\mathrm{pyk}}{\rightarrow}$ “exist-sub " is " where " is " end sub”]

[$\langle * \equiv^0 * \,|\, * := = * \rangle_{\mathrm{Ex}} \stackrel{\mathrm{pyk}}{\rightarrow}$ “exist-sub0 " is " where " is " end sub”]

[$\langle * \equiv^1 * \,|\, * := = * \rangle_{\mathrm{Ex}} \stackrel{\mathrm{pyk}}{\rightarrow}$ “exist-sub1 " is " where " is " end sub”]

[$\langle * \equiv^* * \,|\, * := = * \rangle_{\mathrm{Ex}} \stackrel{\mathrm{pyk}}{\rightarrow}$ “exist-sub$*$ " is " where " is " end sub”]

[$\mathrm{ph}_1 \stackrel{\mathrm{pyk}}{\rightarrow}$ “ph1”]

[$\mathrm{ph}_2 \stackrel{\mathrm{pyk}}{\rightarrow}$ “ph2”]

[$\mathrm{ph}_3 \stackrel{\mathrm{pyk}}{\to}$ “ph3”]

[$*_{\mathrm{Ph}} \stackrel{\mathrm{pyk}}{\to}$ “placeholder-var " end var”]

[$*^{\mathrm{Ph}} \stackrel{\mathrm{pyk}}{\to}$ “" is placeholder-var”]

[$\langle * \equiv * \,|\, * :== * \rangle_{\mathrm{Ph}} \stackrel{\mathrm{pyk}}{\to}$ “ph-sub " is " where " is " end sub”]

[$\langle * \equiv^0 * \,|\, * :== * \rangle_{\mathrm{Ph}} \stackrel{\mathrm{pyk}}{\to}$ “ph-sub0 " is " where " is " end sub”]

[$\langle * \equiv^1 * \,|\, * :== * \rangle_{\mathrm{Ph}} \stackrel{\mathrm{pyk}}{\to}$ “ph-sub1 " is " where " is " end sub”]

[$\langle * \equiv^* * \,|\, * :== * \rangle_{\mathrm{Ph}} \stackrel{\mathrm{pyk}}{\to}$ “ph-sub∗ " is " where " is " end sub”]

[$\langle * \equiv * \,|\, * :== * \rangle_{\mathrm{Me}} \stackrel{\mathrm{pyk}}{\to}$ “meta-sub " is " where " is " end sub”]

[$\langle * \equiv^1 * \,|\, * :== * \rangle_{\mathrm{Me}} \stackrel{\mathrm{pyk}}{\to}$ “meta-sub1 " is " where " is " end sub”]

[$\langle * \equiv^* * \,|\, * :== * \rangle_{\mathrm{Me}} \stackrel{\mathrm{pyk}}{\to}$ “meta-sub∗ " is " where " is " end sub”]

[$\mathsf{bs} \stackrel{\mathrm{pyk}}{\to}$ “var big set”]

[$\mathsf{OBS} \stackrel{\mathrm{pyk}}{\to}$ “object big set”]

[$\mathcal{BS} \stackrel{\mathrm{pyk}}{\to}$ “meta big set”]

[Ø $\stackrel{\mathrm{pyk}}{\to}$ “zermelo empty set”]

[SystemQ $\stackrel{\mathrm{pyk}}{\to}$ “system Q”]

[MP $\stackrel{\mathrm{pyk}}{\to}$ “1rule mp”]

[Gen $\stackrel{\mathrm{pyk}}{\to}$ “1rule gen”]

[Repetition $\stackrel{\mathrm{pyk}}{\to}$ “1rule repetition”]

[Neg $\stackrel{\mathrm{pyk}}{\to}$ “1rule ad absurdum”]

[Ded $\stackrel{\mathrm{pyk}}{\to}$ “1rule deduction”]

[ExistIntro $\stackrel{\mathrm{pyk}}{\to}$ “1rule exist intro”]

[Extensionality $\stackrel{\mathrm{pyk}}{\to}$ “axiom extensionality”]

[Ødef $\stackrel{\mathrm{pyk}}{\to}$ “axiom empty set”]

[PairDef $\stackrel{\mathrm{pyk}}{\to}$ “axiom pair definition”]

[UnionDef $\stackrel{\mathrm{pyk}}{\to}$ “axiom union definition”]

[PowerDef $\stackrel{\mathrm{pyk}}{\to}$ “axiom power definition”]

[SeparationDef $\stackrel{\mathrm{pyk}}{\to}$ “axiom separation definition”]

[AddDoubleNeg $\stackrel{\mathrm{pyk}}{\to}$ “prop lemma add double neg”]

[RemoveDoubleNeg $\stackrel{\mathrm{pyk}}{\to}$ “prop lemma remove double neg”]

[AndCommutativity $\stackrel{\mathrm{pyk}}{\to}$ “prop lemma and commutativity”]

[AutoImply $\stackrel{\mathrm{pyk}}{\to}$ “prop lemma auto imply”]

[Contrapositive $\stackrel{\mathrm{pyk}}{\to}$ “prop lemma contrapositive”]

[FirstConjunct $\stackrel{\mathrm{pyk}}{\to}$ “prop lemma first conjunct”]

[SecondConjunct $\stackrel{\mathrm{pyk}}{\to}$ “prop lemma second conjunct”]

[FromContradiction $\stackrel{\mathrm{pyk}}{\to}$ “prop lemma from contradiction”]

[FromDisjuncts $\stackrel{\text{pyk}}{\to}$ “prop lemma from disjuncts”]

[IffCommutativity $\stackrel{\text{pyk}}{\to}$ “prop lemma iff commutativity”]

[IffFirst $\stackrel{\text{pyk}}{\to}$ “prop lemma iff first”]

[IffSecond $\stackrel{\text{pyk}}{\to}$ “prop lemma iff second”]

[ImplyTransitivity $\stackrel{\text{pyk}}{\to}$ “prop lemma imply transitivity”]

[JoinConjuncts $\stackrel{\text{pyk}}{\to}$ “prop lemma join conjuncts”]

[MP2 $\stackrel{\text{pyk}}{\to}$ “prop lemma mp2”]

[MP3 $\stackrel{\text{pyk}}{\to}$ “prop lemma mp3”]

[MP4 $\stackrel{\text{pyk}}{\to}$ “prop lemma mp4”]

[MP5 $\stackrel{\text{pyk}}{\to}$ “prop lemma mp5”]

[MT $\stackrel{\text{pyk}}{\to}$ “prop lemma mt”]

[NegativeMT $\stackrel{\text{pyk}}{\to}$ “prop lemma negative mt”]

[Technicality $\stackrel{\text{pyk}}{\to}$ “prop lemma technicality”]

[Weakening $\stackrel{\text{pyk}}{\to}$ “prop lemma weakening”]

[WeakenOr1 $\stackrel{\text{pyk}}{\to}$ “prop lemma weaken or first”]

[WeakenOr2 $\stackrel{\text{pyk}}{\to}$ “prop lemma weaken or second”]

[Formula2Pair $\stackrel{\text{pyk}}{\to}$ “lemma formula2pair”]

[Pair2Formula $\stackrel{\text{pyk}}{\to}$ “lemma pair2formula”]

[Formula2Union $\stackrel{\text{pyk}}{\to}$ “lemma formula2union”]

[Union2Formula $\stackrel{\text{pyk}}{\to}$ “lemma union2formula”]

[Formula2Sep $\stackrel{\text{pyk}}{\to}$ “lemma formula2separation”]

[Sep2Formula $\stackrel{\text{pyk}}{\to}$ “lemma separation2formula”]

[Formula2Power $\stackrel{\text{pyk}}{\to}$ “lemma formula2power”]

[SubsetInPower $\stackrel{\text{pyk}}{\to}$ “lemma subset in power set”]

[HelperPowerIsSub $\stackrel{\text{pyk}}{\to}$ “lemma power set is subset0”]

[PowerIsSub $\stackrel{\text{pyk}}{\to}$ “lemma power set is subset”]

[(Switch)HelperPowerIsSub $\stackrel{\text{pyk}}{\to}$ “lemma power set is subset0-switch”]

[(Switch)PowerIsSub $\stackrel{\text{pyk}}{\to}$ “lemma power set is subset-switch”]

[ToSetEquality $\stackrel{\text{pyk}}{\to}$ “lemma set equality suff condition”]

[HelperToSetEquality(t) $\stackrel{\text{pyk}}{\to}$ “lemma set equality suff condition(t)0”]

[ToSetEquality(t) $\stackrel{\text{pyk}}{\to}$ “lemma set equality suff condition(t)”]

[HelperFromSetEquality $\stackrel{\text{pyk}}{\to}$ “lemma set equality skip quantifier”]

[FromSetEquality $\stackrel{\text{pyk}}{\to}$ “lemma set equality nec condition”]

[HelperReflexivity $\stackrel{\text{pyk}}{\to}$ “lemma reflexivity0”]

[Reflexivity $\stackrel{\text{pyk}}{\to}$ “lemma reflexivity”]

[HelperSymmetry $\stackrel{\text{pyk}}{\to}$ "lemma symmetry0"]

[Symmetry $\stackrel{\text{pyk}}{\to}$ "lemma symmetry"]

[HelperTransitivity $\stackrel{\text{pyk}}{\to}$ "lemma transitivity0"]

[Transitivity $\stackrel{\text{pyk}}{\to}$ "lemma transitivity"]

[ERisReflexive $\stackrel{\text{pyk}}{\to}$ "lemma er is reflexive"]

[ERisSymmetric $\stackrel{\text{pyk}}{\to}$ "lemma er is symmetric"]

[ERisTransitive $\stackrel{\text{pyk}}{\to}$ "lemma er is transitive"]

[ØisSubset $\stackrel{\text{pyk}}{\to}$ "lemma empty set is subset"]

[HelperMemberNotØ $\stackrel{\text{pyk}}{\to}$ "lemma member not empty0"]

[MemberNotØ $\stackrel{\text{pyk}}{\to}$ "lemma member not empty"]

[HelperUniqueØ $\stackrel{\text{pyk}}{\to}$ "lemma unique empty set0"]

[UniqueØ $\stackrel{\text{pyk}}{\to}$ "lemma unique empty set"]

[==Reflexivity $\stackrel{\text{pyk}}{\to}$ "lemma ==Reflexivity"]

[==Symmetry $\stackrel{\text{pyk}}{\to}$ "lemma ==Symmetry"]

[Helper==Transitivity $\stackrel{\text{pyk}}{\to}$ "lemma ==Transitivity0"]

[==Transitivity $\stackrel{\text{pyk}}{\to}$ "lemma ==Transitivity"]

[HelperTransferNotEq $\stackrel{\text{pyk}}{\to}$ "lemma transfer ˜is0"]

[TransferNotEq $\stackrel{\text{pyk}}{\to}$ "lemma transfer ˜is"]

[HelperPairSubset $\stackrel{\text{pyk}}{\to}$ "lemma pair subset0"]

[Helper(2)PairSubset $\stackrel{\text{pyk}}{\to}$ "lemma pair subset1"]

[PairSubset $\stackrel{\text{pyk}}{\to}$ "lemma pair subset"]

[SamePair $\stackrel{\text{pyk}}{\to}$ "lemma same pair"]

[SameSingleton $\stackrel{\text{pyk}}{\to}$ "lemma same singleton"]

[UnionSubset $\stackrel{\text{pyk}}{\to}$ "lemma union subset"]

[SameUnion $\stackrel{\text{pyk}}{\to}$ "lemma same union"]

[SeparationSubset $\stackrel{\text{pyk}}{\to}$ "lemma separation subset"]

[SameSeparation $\stackrel{\text{pyk}}{\to}$ "lemma same separation"]

[SameBinaryUnion $\stackrel{\text{pyk}}{\to}$ "lemma same binary union"]

[IntersectionSubset $\stackrel{\text{pyk}}{\to}$ "lemma intersection subset"]

[SameIntersection $\stackrel{\text{pyk}}{\to}$ "lemma same intersection"]

[AutoMember $\stackrel{\text{pyk}}{\to}$ "lemma auto member"]

[HelperEqSysNotØ $\stackrel{\text{pyk}}{\to}$ "lemma eq-system not empty0"]

[EqSysNotØ $\stackrel{\text{pyk}}{\to}$ "lemma eq-system not empty"]

[HelperEqSubset $\stackrel{\text{pyk}}{\to}$ "lemma eq subset0"]

[EqSubset $\stackrel{\text{pyk}}{\to}$ "lemma eq subset"]

[HelperEqNecessary $\stackrel{\text{pyk}}{\to}$ “lemma equivalence nec condition0”]

[EqNecessary $\stackrel{\text{pyk}}{\to}$ “lemma equivalence nec condition”]

[HelperNoneEqNecessary $\stackrel{\text{pyk}}{\to}$ “lemma none-equivalence nec condition0”]

[Helper(2)NoneEqNecessary $\stackrel{\text{pyk}}{\to}$ “lemma none-equivalence nec condition1”]

[NoneEqNecessary $\stackrel{\text{pyk}}{\to}$ “lemma none-equivalence nec condition”]

[EqClassIsSubset $\stackrel{\text{pyk}}{\to}$ “lemma equivalence class is subset”]

[EqClassesAreDisjoint $\stackrel{\text{pyk}}{\to}$ “lemma equivalence classes are disjoint”]

[AllDisjoint $\stackrel{\text{pyk}}{\to}$ “lemma all disjoint”]

[AllDisjointImply $\stackrel{\text{pyk}}{\to}$ “lemma all disjoint-imply”]

[BSsubset $\stackrel{\text{pyk}}{\to}$ “lemma bs subset union(bs/r)”]

[Union(BS/R)subset $\stackrel{\text{pyk}}{\to}$ “lemma union(bs/r) subset bs”]

[UnionIdentity $\stackrel{\text{pyk}}{\to}$ “lemma union(bs/r) is bs”]

[EqSysIsPartition $\stackrel{\text{pyk}}{\to}$ “theorem eq-system is partition”]

[(x1) $\stackrel{\text{pyk}}{\to}$ “var x1”]

[(x2) $\stackrel{\text{pyk}}{\to}$ “var x2”]

[(y1) $\stackrel{\text{pyk}}{\to}$ “var y1”]

[(y2) $\stackrel{\text{pyk}}{\to}$ “var y2”]

[(v1) $\stackrel{\text{pyk}}{\to}$ “var v1”]

[(v2) $\stackrel{\text{pyk}}{\to}$ “var v2”]

[(v3) $\stackrel{\text{pyk}}{\to}$ “var v3”]

[(v4) $\stackrel{\text{pyk}}{\to}$ “var v4”]

[(v2n) $\stackrel{\text{pyk}}{\to}$ “var v2n”]

[(m1) $\stackrel{\text{pyk}}{\to}$ “var m1”]

[(m2) $\stackrel{\text{pyk}}{\to}$ “var m2”]

[(n1) $\stackrel{\text{pyk}}{\to}$ “var n1”]

[(n2) $\stackrel{\text{pyk}}{\to}$ “var n2”]

[(n3) $\stackrel{\text{pyk}}{\to}$ “var n3”]

[(ϵ) $\stackrel{\text{pyk}}{\to}$ “var ep”]

[$(\epsilon)_1$ $\stackrel{\text{pyk}}{\to}$ “var ep1”]

[$(\epsilon 2)$ $\stackrel{\text{pyk}}{\to}$ “var ep2”]

[(fep) $\stackrel{\text{pyk}}{\to}$ “var fep”]

[(fx) $\stackrel{\text{pyk}}{\to}$ “var fx”]

[(fy) $\stackrel{\text{pyk}}{\to}$ “var fy”]

[(fz) $\stackrel{\text{pyk}}{\to}$ “var fz”]

[(fu) $\stackrel{\text{pyk}}{\to}$ “var fu”] [(fv) $\stackrel{\text{pyk}}{\rightarrow}$ "var fv"]

[(fw) $\stackrel{\text{pyk}}{\rightarrow}$ "var fw"]

[(rx) $\stackrel{\text{pyk}}{\rightarrow}$ "var rx"]

[(ry) $\stackrel{\text{pyk}}{\rightarrow}$ "var ry"]

[(rz) $\stackrel{\text{pyk}}{\rightarrow}$ "var rz"]

[(ru) $\stackrel{\text{pyk}}{\rightarrow}$ "var ru"]

[(sx) $\stackrel{\text{pyk}}{\rightarrow}$ "var sx"]

[(sx1) $\stackrel{\text{pyk}}{\rightarrow}$ "var sx1"]

[(sy) $\stackrel{\text{pyk}}{\rightarrow}$ "var sy"]

[(sy1) $\stackrel{\text{pyk}}{\rightarrow}$ "var sy1"]

[(sz) $\stackrel{\text{pyk}}{\rightarrow}$ "var sz"]

[(sz1) $\stackrel{\text{pyk}}{\rightarrow}$ "var sz1"]

[(su) $\stackrel{\text{pyk}}{\rightarrow}$ "var su"]

[(su1) $\stackrel{\text{pyk}}{\rightarrow}$ "var su1"]

[(fxs) $\stackrel{\text{pyk}}{\rightarrow}$ "var fxs"]

[(fys) $\stackrel{\text{pyk}}{\rightarrow}$ "var fys"]

[(crs1) $\stackrel{\text{pyk}}{\rightarrow}$ "var crs1"]

[(f1) $\stackrel{\text{pyk}}{\rightarrow}$ "var f1"]

[(f2) $\stackrel{\text{pyk}}{\rightarrow}$ "var f2"]

[(f3) $\stackrel{\text{pyk}}{\rightarrow}$ "var f3"]

[(f4) $\stackrel{\text{pyk}}{\rightarrow}$ "var f4"]

[(op1) $\stackrel{\text{pyk}}{\rightarrow}$ "var op1"]

[(op2) $\stackrel{\text{pyk}}{\rightarrow}$ "var op2"]

[(r1) $\stackrel{\text{pyk}}{\rightarrow}$ "var r1"]

[(s1) $\stackrel{\text{pyk}}{\rightarrow}$ "var s1"]

[(s2) $\stackrel{\text{pyk}}{\rightarrow}$ "var s2"]

[X_1 $\stackrel{\text{pyk}}{\rightarrow}$ "meta x1"]

[X_2 $\stackrel{\text{pyk}}{\rightarrow}$ "meta x2"]

[Y_1 $\stackrel{\text{pyk}}{\rightarrow}$ "meta y1"]

[Y_2 $\stackrel{\text{pyk}}{\rightarrow}$ "meta y2"]

[V_1 $\stackrel{\text{pyk}}{\rightarrow}$ "meta v1"]

[V_2 $\stackrel{\text{pyk}}{\rightarrow}$ "meta v2"]

[V_3 $\stackrel{\text{pyk}}{\rightarrow}$ "meta v3"]

[V_4 $\stackrel{\text{pyk}}{\rightarrow}$ "meta v4"]

[$\mathrm{V}_{2\mathrm{n}}$ $\stackrel{\text{pyk}}{\rightarrow}$ "meta v2n"]

$[M_1 \stackrel{\text{pyk}}{\rightarrow}$ "meta m1"$]$

$[M_2 \stackrel{\text{pyk}}{\rightarrow}$ "meta m2"$]$

$[N_1 \stackrel{\text{pyk}}{\rightarrow}$ "meta n1"$]$

$[N_2 \stackrel{\text{pyk}}{\rightarrow}$ "meta n2"$]$

$[N_3 \stackrel{\text{pyk}}{\rightarrow}$ "meta n3"$]$

$[\epsilon \stackrel{\text{pyk}}{\rightarrow}$ "meta ep"$]$

$[\epsilon 1 \stackrel{\text{pyk}}{\rightarrow}$ "meta ep1"$]$

$[\epsilon 2 \stackrel{\text{pyk}}{\rightarrow}$ "meta ep2"$]$

$[\mathrm{FX} \stackrel{\text{pyk}}{\rightarrow}$ "meta fx"$]$

$[\mathrm{FY} \stackrel{\text{pyk}}{\rightarrow}$ "meta fy"$]$

$[\mathrm{FZ} \stackrel{\text{pyk}}{\rightarrow}$ "meta fz"$]$

$[\mathrm{FU} \stackrel{\text{pyk}}{\rightarrow}$ "meta fu"$]$

$[\mathrm{FV} \stackrel{\text{pyk}}{\rightarrow}$ "meta fv"$]$

$[\mathrm{FW} \stackrel{\text{pyk}}{\rightarrow}$ "meta fw"$]$

$[\mathrm{FEP} \stackrel{\text{pyk}}{\rightarrow}$ "meta fep"$]$

$[\mathrm{RX} \stackrel{\text{pyk}}{\rightarrow}$ "meta rx"$]$

$[\mathrm{RY} \stackrel{\text{pyk}}{\rightarrow}$ "meta ry"$]$

$[\mathrm{RZ} \stackrel{\text{pyk}}{\rightarrow}$ "meta rz"$]$

$[\mathrm{RU} \stackrel{\text{pyk}}{\rightarrow}$ "meta ru"$]$

$[(\mathrm{SX}) \stackrel{\text{pyk}}{\rightarrow}$ "meta sx"$]$

$[(\mathrm{SX1}) \stackrel{\text{pyk}}{\rightarrow}$ "meta sx1"$]$

$[(\mathrm{SY}) \stackrel{\text{pyk}}{\rightarrow}$ "meta sy"$]$

$[(\mathrm{SY1}) \stackrel{\text{pyk}}{\rightarrow}$ "meta sy1"$]$

$[(\mathrm{SZ}) \stackrel{\text{pyk}}{\rightarrow}$ "meta sz"$]$

$[(\mathrm{SZ1}) \stackrel{\text{pyk}}{\rightarrow}$ "meta sz1"$]$

$[(\mathrm{SU}) \stackrel{\text{pyk}}{\rightarrow}$ "meta su"$]$

$[(\mathrm{SU1}) \stackrel{\text{pyk}}{\rightarrow}$ "meta su1"$]$

$[\mathrm{FXS} \stackrel{\text{pyk}}{\rightarrow}$ "meta fxs"$]$

$[\mathrm{FYS} \stackrel{\text{pyk}}{\rightarrow}$ "meta fys"$]$

$[(\mathrm{F1}) \stackrel{\text{pyk}}{\rightarrow}$ "meta f1"$]$

$[(\mathrm{F2}) \stackrel{\text{pyk}}{\rightarrow}$ "meta f2"$]$

$[(\mathrm{F3}) \stackrel{\text{pyk}}{\rightarrow}$ "meta f3"$]$

$[(\mathrm{F4}) \stackrel{\text{pyk}}{\rightarrow}$ "meta f4"$]$

$[(\mathrm{OP1}) \stackrel{\text{pyk}}{\rightarrow}$ "meta op1"$]$

$[(\mathrm{OP2}) \stackrel{\text{pyk}}{\rightarrow}$ "meta op2"$]$

[(R1) $\stackrel{\text{pyk}}{\to}$ "meta r1"]

[(S1) $\stackrel{\text{pyk}}{\to}$ "meta s1"]

[(S2) $\stackrel{\text{pyk}}{\to}$ "meta s2"]

[(EPob) $\stackrel{\text{pyk}}{\to}$ "object ep"]

[(CRS1ob) $\stackrel{\text{pyk}}{\to}$ "object crs1"]

[(F1ob) $\stackrel{\text{pyk}}{\to}$ "object f1"]

[(F2ob) $\stackrel{\text{pyk}}{\to}$ "object f2"]

[(F3ob) $\stackrel{\text{pyk}}{\to}$ "object f3"]

[(F4ob) $\stackrel{\text{pyk}}{\to}$ "object f4"]

[(N1ob) $\stackrel{\text{pyk}}{\to}$ "object n1"]

[(N2ob) $\stackrel{\text{pyk}}{\to}$ "object n2"]

[(OP1ob) $\stackrel{\text{pyk}}{\to}$ "object op1"]

[(OP2ob) $\stackrel{\text{pyk}}{\to}$ "object op2"]

[(R1ob) $\stackrel{\text{pyk}}{\to}$ "object r1"]

[(S1ob) $\stackrel{\text{pyk}}{\to}$ "object s1"]

[(S2ob) $\stackrel{\text{pyk}}{\to}$ "object s2"]

[$\mathrm{ph}_4 \stackrel{\text{pyk}}{\to}$ "ph4"]

[$\mathrm{ph}_5 \stackrel{\text{pyk}}{\to}$ "ph5"]

[$\mathrm{ph}_6 \stackrel{\text{pyk}}{\to}$ "ph6"]

[NAT $\stackrel{\text{pyk}}{\to}$ "NAT"]

[$\mathrm{RATIONAL_SERIES} \stackrel{\text{pyk}}{\to}$ "RATIONAL_SERIES"]

[SERIES $\stackrel{\text{pyk}}{\to}$ "SERIES"]

[SetOfReals $\stackrel{\text{pyk}}{\to}$ "setOfReals"]

[SetOfFxs $\stackrel{\text{pyk}}{\to}$ "setOfFxs"]

[N $\stackrel{\text{pyk}}{\to}$ "N"]

[Q $\stackrel{\text{pyk}}{\to}$ "Q"]

[X $\stackrel{\text{pyk}}{\to}$ "X"]

[xs $\stackrel{\text{pyk}}{\to}$ "xs"]

[xaF $\stackrel{\text{pyk}}{\to}$ "xsF"]

[ysF $\stackrel{\text{pyk}}{\to}$ "ysF"]

[us $\stackrel{\text{pyk}}{\to}$ "us"]

[usFoelge $\stackrel{\text{pyk}}{\to}$ "usF"]

[0 $\stackrel{\text{pyk}}{\to}$ "0"]

[1 $\stackrel{\text{pyk}}{\to}$ "1"]

[$(-1) \stackrel{\text{pyk}}{\to}$ "(-1)"]

[2 $\stackrel{\text{pyk}}{\rightarrow}$ "2"]

[3 $\stackrel{\text{pyk}}{\rightarrow}$ "3"]

[1/2 $\stackrel{\text{pyk}}{\rightarrow}$ "1/2"]

[1/3 $\stackrel{\text{pyk}}{\rightarrow}$ "1/3"]

[2/3 $\stackrel{\text{pyk}}{\rightarrow}$ "2/3"]

[0f $\stackrel{\text{pyk}}{\rightarrow}$ "0f"]

[1f $\stackrel{\text{pyk}}{\rightarrow}$ "1f"]

[00 $\stackrel{\text{pyk}}{\rightarrow}$ "00"]

[01 $\stackrel{\text{pyk}}{\rightarrow}$ "01"]

[$(- - 01)$ $\stackrel{\text{pyk}}{\rightarrow}$ "(--01)"]

[02 $\stackrel{\text{pyk}}{\rightarrow}$ "02"]

[01//02 $\stackrel{\text{pyk}}{\rightarrow}$ "01//02"]

[PlusAssociativity(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma plusAssociativity(R)"]

[PlusAssociativity(R)XX $\stackrel{\text{pyk}}{\rightarrow}$ "lemma plusAssociativity(R)XX"]

[Plus0(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma plus0(R)"]

[Negative(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma negative(R)"]

[Times1(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma times1(R)"]

[lessAddition(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma lessAddition(R)"]

[PlusCommutativity(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma plusCommutativity(R)"]

[LeqAntisymmetry(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma leqAntisymmetry(R)"]

[LeqTransitivity(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma leqTransitivity(R)"]

[leqAddition(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma leqAddition(R)"]

[Distribution(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma distribution(R)"]

[A4(Axiom) $\stackrel{\text{pyk}}{\rightarrow}$ "axiom a4"]

[InductionAxiom $\stackrel{\text{pyk}}{\rightarrow}$ "axiom induction"]

[EqualityAxiom $\stackrel{\text{pyk}}{\rightarrow}$ "axiom equality"]

[EqLeqAxiom $\stackrel{\text{pyk}}{\rightarrow}$ "axiom eqLeq"]

[EqAdditionAxiom $\stackrel{\text{pyk}}{\rightarrow}$ "axiom eqAddition"]

[EqMultiplicationAxiom $\stackrel{\text{pyk}}{\rightarrow}$ "axiom eqMultiplication"]

[QisClosed(Reciprocal)(Imply) $\stackrel{\text{pyk}}{\rightarrow}$ "axiom QisClosed(reciprocal)"]

[QisClosed(Reciprocal) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma QisClosed(reciprocal)"]

[QisClosed(Negative)(Imply) $\stackrel{\text{pyk}}{\rightarrow}$ "axiom QisClosed(negative)"]

[QisClosed(Negative) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma QisClosed(negative)"]

[leqReflexivity $\stackrel{\text{pyk}}{\rightarrow}$ "axiom leqReflexivity"]

[leqAntisymmetryAxiom $\stackrel{\text{pyk}}{\rightarrow}$ "axiom leqAntisymmetry"] [leqTransitivityAxiom $\stackrel{\text{pyk}}{\rightarrow}$ "axiom leqTransitivity"]

[leqTotality $\stackrel{\text{pyk}}{\rightarrow}$ "axiom leqTotality"]

[leqAdditionAxiom $\stackrel{\text{pyk}}{\rightarrow}$ "axiom leqAddition"]

[leqMultiplicationAxiom $\stackrel{\text{pyk}}{\rightarrow}$ "axiom leqMultiplication"]

[plusAssociativity $\stackrel{\text{pyk}}{\rightarrow}$ "axiom plusAssociativity"]

[plusCommutativity $\stackrel{\text{pyk}}{\rightarrow}$ "axiom plusCommutativity"]

[Negative $\stackrel{\text{pyk}}{\rightarrow}$ "axiom negative"]

[plus0 $\stackrel{\text{pyk}}{\rightarrow}$ "axiom plus0"]

[timesAssociativity $\stackrel{\text{pyk}}{\rightarrow}$ "axiom timesAssociativity"]

[timesCommutativity $\stackrel{\text{pyk}}{\rightarrow}$ "axiom timesCommutativity"]

[ReciprocalAxiom $\stackrel{\text{pyk}}{\rightarrow}$ "axiom reciprocal"]

[times1 $\stackrel{\text{pyk}}{\rightarrow}$ "axiom times1"]

[Distribution $\stackrel{\text{pyk}}{\rightarrow}$ "axiom distribution"]

[0not1 $\stackrel{\text{pyk}}{\rightarrow}$ "axiom 0not1"]

[lemma eqLeq(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma eqLeq(R)"]

[TimesAssociativity(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma timesAssociativity(R)"]

[TimesCommutativity(R) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma timesCommutativity(R)"]

[(Adgic)SameR $\stackrel{\text{pyk}}{\rightarrow}$ "1rule adhoc sameR"]

[Separation2formula(1) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma separation2formula(1)"]

[Separation2formula(2) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma separation2formula(2)"]

[Cauchy $\stackrel{\text{pyk}}{\rightarrow}$ "axiom cauchy"]

[PlusF $\stackrel{\text{pyk}}{\rightarrow}$ "axiom plusF"]

[ReciprocalF $\stackrel{\text{pyk}}{\rightarrow}$ "axiom reciprocalF"]

[From ==$\stackrel{\text{pyk}}{\rightarrow}$ "1rule from=="]

[To ==$\stackrel{\text{pyk}}{\rightarrow}$ "1rule to=="]

[FromInR $\stackrel{\text{pyk}}{\rightarrow}$ "1rule fromInR"]

[PlusR(Sym) $\stackrel{\text{pyk}}{\rightarrow}$ "lemma plusR(Sym)"]

[ReciprocalR(Axiom) $\stackrel{\text{pyk}}{\rightarrow}$ "axiom reciprocalR"]

[LessMinus1(N) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule lessMinus1(N)"]

[Nonnegative(N) $\stackrel{\text{pyk}}{\rightarrow}$ "axiom nonnegative(N)"]

[US0 $\stackrel{\text{pyk}}{\rightarrow}$ "axiom US0"]

[NextXS(UpperBound) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule nextXS(upperBound)"]

[NextXS(NoUpperBound) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule nextXS(noUpperBound)"]

[NextUS(UpperBound) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule nextUS(upperBound)"]

[NextUS(NoUpperBound) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule nextUS(noUpperBound)"]

[ExpZero $\stackrel{\text{pyk}}{\rightarrow}$ "1rule expZero"]

[ExpPositive $\stackrel{\text{pyk}}{\rightarrow}$ "1rule expPositive"]

[ExpZero(R) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule expZero(R)"]

[ExpPositive(R) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule expPositive(R)"]

[BSzero $\stackrel{\text{pyk}}{\rightarrow}$ "1rule base(1/2)Sum zero"]

[BSpositive $\stackrel{\text{pyk}}{\rightarrow}$ "1rule base(1/2)Sum positive"]

[UStelescope(Zero) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule UStelescope zero"]

[UStelescope(Positive) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule UStelescope positive"]

[EqAddition(R) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule adhoc eqAddition(R)"]

[FromLimit $\stackrel{\text{pyk}}{\rightarrow}$ "1rule fromLimit"]

[ToUpperBound $\stackrel{\text{pyk}}{\rightarrow}$ "1rule toUpperBound"]

[FromUpperBound $\stackrel{\text{pyk}}{\rightarrow}$ "1rule fromUpperBound"]

[USisUpperBound $\stackrel{\text{pyk}}{\rightarrow}$ "axiom USisUpperBound"]

[0not1(R) $\stackrel{\text{pyk}}{\rightarrow}$ "axiom 0not1(R)"]

[ExpUnbounded(R) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule expUnbounded"]

[FromLeq(Advanced)(N) $\stackrel{\text{pyk}}{\rightarrow}$ "1rule fromLeq(Advanced)(N)"]

[FromLeastUpperBound $\stackrel{\text{pyk}}{\rightarrow}$ "1rule fromLeastUpperBound"]

[ToLeastUpperBound $\stackrel{\text{pyk}}{\rightarrow}$ "1rule toLeastUpperBound"]

[XSisNotUpperBound $\stackrel{\text{pyk}}{\rightarrow}$ "axiom XSisNotUpperBound"]

[ysFGreater $\stackrel{\text{pyk}}{\rightarrow}$ "axiom ysFGreater"]

[ysFLess $\stackrel{\text{pyk}}{\rightarrow}$ "axiom ysFLess"]

[SmallInverse $\stackrel{\text{pyk}}{\rightarrow}$ "1rule smallInverse"]

[NatType $\stackrel{\text{pyk}}{\rightarrow}$ "axiom natType"]

[RationalType $\stackrel{\text{pyk}}{\rightarrow}$ "axiom rationalType"]

[SeriesType $\stackrel{\text{pyk}}{\rightarrow}$ "axiom seriesType"]

[Max $\stackrel{\text{pyk}}{\rightarrow}$ "axiom max"]

[Numerical $\stackrel{\text{pyk}}{\rightarrow}$ "axiom numerical"]

[NumericalF $\stackrel{\text{pyk}}{\rightarrow}$ "axiom numericalF"]

[MemberOfSeries(Imply) $\stackrel{\text{pyk}}{\rightarrow}$ "axiom memberOfSeries"]

[JoinConjuncts(2conditions) $\stackrel{\text{pyk}}{\rightarrow}$ "prop lemma doubly conditioned join conjuncts"]

[prop lemma imply negation $\stackrel{\text{pyk}}{\rightarrow}$ "prop lemma imply negation"]

[TND $\stackrel{\text{pyk}}{\rightarrow}$ "prop lemma tertium non datur"]

[FromNegatedImply $\stackrel{\text{pyk}}{\rightarrow}$ "prop lemma from negated imply"]

[ToNegatedImply $\stackrel{\text{pyk}}{\rightarrow}$ "prop lemma to negated imply"]

[FromNegated(2 * Imply) $\stackrel{\text{pyk}}{\to}$ "prop lemma from negated double imply"]

[FromNegatedAnd $\stackrel{\text{pyk}}{\to}$ "prop lemma from negated and"]

[FromNegatedOr $\stackrel{\text{pyk}}{\to}$ "prop lemma from negated or"]

[ToNegatedOr $\stackrel{\text{pyk}}{\to}$ "prop lemma to negated or"]

[FromNegations $\stackrel{\text{pyk}}{\to}$ "prop lemma from negations"]

[From3Disjuncts $\stackrel{\text{pyk}}{\to}$ "prop lemma from three disjuncts"]

[From2 * 2Disjuncts $\stackrel{\text{pyk}}{\to}$ "prop lemma from two times two disjuncts"]

[NegateDisjunct1 $\stackrel{\text{pyk}}{\to}$ "prop lemma negate first disjunct"]

[NegateDisjunct2 $\stackrel{\text{pyk}}{\to}$ "prop lemma negate second disjunct"]

[ExpandDisjuncts $\stackrel{\text{pyk}}{\to}$ "prop lemma expand disjuncts"]

[SENC1 $\stackrel{\text{pyk}}{\to}$ "lemma set equality nec condition(1)"]

[SENC2 $\stackrel{\text{pyk}}{\to}$ "lemma set equality nec condition(2)"]

[LessLeq(R) $\stackrel{\text{pyk}}{\to}$ "lemma lessLeq(R)"]

[MemberOfSeries $\stackrel{\text{pyk}}{\to}$ "lemma memberOfSeries"]

[memberOfSeries(Type) $\stackrel{\text{pyk}}{\to}$ "lemma memberOfSeries(Type)"]

[*(exp)* $\stackrel{\text{pyk}}{\to}$ "" ^ ""]

[R(*) $\stackrel{\text{pyk}}{\to}$ "R(")"]

[− − R(*) $\stackrel{\text{pyk}}{\to}$ "--R(")"]

[rec* $\stackrel{\text{pyk}}{\to}$ "1/ ""]

[*/* $\stackrel{\text{pyk}}{\to}$ "eq-system of " modulo ""]

[* ∩ * $\stackrel{\text{pyk}}{\to}$ "intersection " comma " end intersection"]

[*[*] $\stackrel{\text{pyk}}{\to}$ "[" ; "]"]

[∪* $\stackrel{\text{pyk}}{\to}$ "union " end union"]

[* ∪ * $\stackrel{\text{pyk}}{\to}$ "binary-union " comma " end union"]

[P(*) $\stackrel{\text{pyk}}{\to}$ "power " end power"]

[{*} $\stackrel{\text{pyk}}{\to}$ "zermelo singleton " end singleton"]

[StateExpand(*, *, *) $\stackrel{\text{pyk}}{\to}$ "stateExpand(" , " , ")"]

[extractSeries(*) $\stackrel{\text{pyk}}{\to}$ "extractSeries(")"]

[SetOfSeries(*) $\stackrel{\text{pyk}}{\to}$ "setOfSeries(")"]

[− − Macro(*) $\stackrel{\text{pyk}}{\to}$ "--Macro(")"]

[ExpandList(*, *, *) $\stackrel{\text{pyk}}{\to}$ "expandList(" , " , ")"]

[* * Macro(*) $\stackrel{\text{pyk}}{\to}$ "**Macro(")"]

[+ + Macro(*) $\stackrel{\text{pyk}}{\to}$ "++Macro(")"]

[<< Macro(*) $\stackrel{\text{pyk}}{\to}$ "<<Macro(")"]

[||Macro(*) $\stackrel{\text{pyk}}{\to}$ "||Macro(")"]

[01//Macro(*) $\stackrel{\text{pyk}}{\to}$ "01//Macro(")"]

[UB(*, *) $\stackrel{\text{pyk}}{\to}$ "upperBound(" , ")"]

[LUB(*, *) $\stackrel{\text{pyk}}{\to}$ "leastUpperBound(" , ")"]

[BS(*, *) $\stackrel{\text{pyk}}{\to}$ "base(1/2)Sum(" , ")"]

[UStelescope(*, *) $\stackrel{\text{pyk}}{\to}$ "UStelescope(" , ")"]

[(*) $\stackrel{\text{pyk}}{\to}$ "(")"]

[|f * | $\stackrel{\text{pyk}}{\to}$ "|f " |"]

[|r * | $\stackrel{\text{pyk}}{\to}$ "|r " |"]

[Limit(*, *) $\stackrel{\text{pyk}}{\to}$ "limit(" , ")"]

[Union(*) $\stackrel{\text{pyk}}{\to}$ "U(")"]

[IsOrderedPair(*, *, *) $\stackrel{\text{pyk}}{\to}$ "isOrderedPair(" , " , ")"]

[IsRelation(*, *, *) $\stackrel{\text{pyk}}{\to}$ "isRelation(" , " , ")"]

[isFunction(*, *, *) $\stackrel{\text{pyk}}{\to}$ "isFunction(" , " , ")"]

[IsSeries(*, *) $\stackrel{\text{pyk}}{\to}$ "isSeries(" , ")"]

[IsNatural(*, *) $\stackrel{\text{pyk}}{\to}$ "isNatural(")"]

[OrderedPair(*, *) $\stackrel{\text{pyk}}{\to}$ "(o " , ")"]

[TypeNat(*) $\stackrel{\text{pyk}}{\to}$ "typeNat(")"]

[TypeNat0(*) $\stackrel{\text{pyk}}{\to}$ "typeNat0(")"]

[TypeRational(*) $\stackrel{\text{pyk}}{\to}$ "typeRational(")"]

[TypeRational0(*) $\stackrel{\text{pyk}}{\to}$ "typeRational0(")"]

[TypeSeries(*, *) $\stackrel{\text{pyk}}{\to}$ "typeSeries(" , ")"]

[Typeseries0(*, *) $\stackrel{\text{pyk}}{\to}$ "typeSeries0(" , ")"]

[{*, *} $\stackrel{\text{pyk}}{\to}$ "zermelo pair " comma " end pair"]

[$\langle *, * \rangle$ $\stackrel{\text{pyk}}{\to}$ "zermelo ordered pair " comma " end pair"]

[(−u*) $\stackrel{\text{pyk}}{\to}$ "- ""]

[$-_{\mathrm{f}} *$ $\stackrel{\text{pyk}}{\to}$ "-f ""]

[(− − *) $\stackrel{\text{pyk}}{\to}$ "-- ""]

[1f/* $\stackrel{\text{pyk}}{\to}$ "1f/ ""]

[01//temp* $\stackrel{\text{pyk}}{\to}$ "01// ""]

[*(*, *) $\stackrel{\text{pyk}}{\to}$ "" is related to " under ""]

[ReflRel(*, *) $\stackrel{\text{pyk}}{\to}$ "" is reflexive relation in ""]

[SymRel(*, *) $\stackrel{\text{pyk}}{\to}$ "" is symmetric relation in ""]

[TransRel(*, *) $\stackrel{\text{pyk}}{\to}$ "" is transitive relation in ""]

[EqRel(*, *) $\stackrel{\text{pyk}}{\to}$ "" is equivalence relation in ""]

[$[* \in *]_*$ $\stackrel{\text{pyk}}{\to}$ "equivalence class of " in " modulo ""]

[Partition$(*, *) \stackrel{\text{pyk}}{\rightarrow}$ “" is partition of "”]

[$(* * *) \stackrel{\text{pyk}}{\rightarrow}$ “" * "”]

[$* *_{\text{f}} * \stackrel{\text{pyk}}{\rightarrow}$ “" *f "”]

[$* * ** \stackrel{\text{pyk}}{\rightarrow}$ “" ** "”]

[$(* + *) \stackrel{\text{pyk}}{\rightarrow}$ “" + "”]

[$(* - *) \stackrel{\text{pyk}}{\rightarrow}$ “" - "”]

[$* +_{\text{f}} * \stackrel{\text{pyk}}{\rightarrow}$ “" +f "”]

[$* -_{\text{f}} * \stackrel{\text{pyk}}{\rightarrow}$ “" -f "”]

[$* + + * \stackrel{\text{pyk}}{\rightarrow}$ “" ++ "”]

[$\mathrm{R}(*) - -\mathrm{R}(*) \stackrel{\text{pyk}}{\rightarrow}$ “R(") -- R(")”]

[$* \in * \stackrel{\text{pyk}}{\rightarrow}$ “" in0 "”]

[$| * | \stackrel{\text{pyk}}{\rightarrow}$ “| " |”]

[if$(*, *, *) \stackrel{\text{pyk}}{\rightarrow}$ “if(" , " , ")”]

[Max$(*, *) \stackrel{\text{pyk}}{\rightarrow}$ “max(" , ")”]

[Max$(*, *) \stackrel{\text{pyk}}{\rightarrow}$ “maxR(" , ")”]

[$* = * \stackrel{\text{pyk}}{\rightarrow}$ “" = "”]

[$* \neq * \stackrel{\text{pyk}}{\rightarrow}$ “" != "”]

[$* <= * \stackrel{\text{pyk}}{\rightarrow}$ “" <= "”]

[$* < * \stackrel{\text{pyk}}{\rightarrow}$ “" < "”]

[$* <_{\text{f}} * \stackrel{\text{pyk}}{\rightarrow}$ “" <f "”]

[$* \leq_{\text{f}} * \stackrel{\text{pyk}}{\rightarrow}$ “" <=f "”]

[SF$(*, *) \stackrel{\text{pyk}}{\rightarrow}$ “" sameF "”]

[$* == * \stackrel{\text{pyk}}{\rightarrow}$ “" == "”]

[$*!! == * \stackrel{\text{pyk}}{\rightarrow}$ “" !!== "”]

[$* << * \stackrel{\text{pyk}}{\rightarrow}$ “" << "”]

[$* <<== * \stackrel{\text{pyk}}{\rightarrow}$ “" <<== "”]

[$* {==} * \stackrel{\text{pyk}}{\rightarrow}$ “" zermelo is "”]

[$* \subseteq * \stackrel{\text{pyk}}{\rightarrow}$ “" is subset of "”]

[$\dot{\neg}\,(*)\mathrm{n} \stackrel{\text{pyk}}{\rightarrow}$ “not0 "”]

[$* \notin * \stackrel{\text{pyk}}{\rightarrow}$ “" zermelo ~in "”]

[$* \neq * \stackrel{\text{pyk}}{\rightarrow}$ “" zermelo ~is "”]

[$* \dot{\wedge} * \stackrel{\text{pyk}}{\rightarrow}$ “" and0 "”]

[$* \dot{\vee} * \stackrel{\text{pyk}}{\rightarrow}$ “" or0 "”]

[$\exists * \colon * \stackrel{\text{pyk}}{\rightarrow}$ “exist0 " indeed "”]

[$* \dot{\Leftrightarrow} * \stackrel{\text{pyk}}{\rightarrow}$ “" iff "”]

[$\{ph \in * \mid *\} \stackrel{\text{pyk}}{\rightarrow}$ "the set of ph in " such that " end set"]
[kvanti $\stackrel{\text{pyk}}{\rightarrow}$ "kvanti"]

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[kvanti $\stackrel{\text{tex}}{\rightarrow}$ "kvanti"]

[$(\cdots)$ $\stackrel{\text{tex}}{\rightarrow}$ "(\cdots{})"]

[`Objekt-var` $\stackrel{\text{tex}}{\rightarrow}$ "\texttt{Objekt-var}"]

[`Ex-var` $\stackrel{\text{tex}}{\rightarrow}$ "\texttt{Ex-var}"]

[`Ph-var` $\stackrel{\text{tex}}{\rightarrow}$ "\texttt{Ph-var}"]

[`Værdi` $\stackrel{\text{tex}}{\rightarrow}$ "\texttt{V\ae{}rdi}"]

[`Variabel` $\stackrel{\text{tex}}{\rightarrow}$ "\texttt{Variabel}"]

[Op(x) $\stackrel{\text{tex}}{\rightarrow}$ "Op(#1.
)"]

[Op(x, y) $\stackrel{\text{tex}}{\rightarrow}$ "Op(#1.
, #2.
)"]

[$\mathsf{x} \mathrel{\ddot{==}} \mathsf{y}$ $\stackrel{\text{tex}}{\rightarrow}$ "#1.
\mathrel {\ddot {==}} #2."]

[ContainsEmpty(x) $\stackrel{\text{tex}}{\rightarrow}$ "ContainsEmpty(#1.
)"]

[Dedu(x, y) $\stackrel{\text{tex}}{\rightarrow}$ "
Dedu(#1.
, #2.
)"]

[$\text{Dedu}_0(\mathsf{x}, \mathsf{y})$ $\stackrel{\text{tex}}{\rightarrow}$ "
Dedu_0(#1.
, #2.
)"]

[$\text{Dedu}_\text{s}(\mathsf{x}, \mathsf{y}, \mathsf{z})$ $\stackrel{\text{tex}}{\rightarrow}$ "Dedu_{s}(#1.
, #2.
, #3.
)"]

[$\text{Dedu}_1(\mathsf{x}, \mathsf{y}, \mathsf{z})$ $\stackrel{\text{tex}}{\rightarrow}$ "
Dedu_1(#1.
, #2.

, #3.
)”]

[$\text{Dedu}_2(\mathsf{x}, \mathsf{y}, \mathsf{z}) \overset{\text{tex}}{\to}$ “
Dedu_2(#1.
, #2.
, #3.
)”]

[$\text{Dedu}_3(\mathsf{x}, \mathsf{y}, \mathsf{z}, \mathsf{u}) \overset{\text{tex}}{\to}$ “
Dedu_3(#1.
, #2.
, #3.
, #4.
)”]

[$\text{Dedu}_4(\mathsf{x}, \mathsf{y}, \mathsf{z}, \mathsf{u}) \overset{\text{tex}}{\to}$ “
Dedu_4(#1.
, #2.
, #3.
, #4.
)”]

[$\text{Dedu}_4^*(\mathsf{x}, \mathsf{y}, \mathsf{z}, \mathsf{u}) \overset{\text{tex}}{\to}$ “
Dedu_4ˆ∗(#1.
, #2.
, #3.
, #4.
)”]

[$\text{Dedu}_5(\mathsf{x}, \mathsf{y}, \mathsf{z}) \overset{\text{tex}}{\to}$ “
Dedu_5(#1.
, #2.
, #3.
)”]

[$\text{Dedu}_6(\mathsf{p}, \mathsf{c}, \mathsf{e}, \mathsf{b}) \overset{\text{tex}}{\to}$ “
Dedu_6(#1.
, #2.
, #3.
, #4.
)”]

[$\text{Dedu}_6^*(\mathsf{p}, \mathsf{c}, \mathsf{e}, \mathsf{b}) \overset{\text{tex}}{\to}$ “
Dedu_6ˆ∗(#1.
, #2.
, #3.

, #4.
)"]

[$\mathrm{Dedu}_7(\mathsf{p}) \stackrel{\text{tex}}{\to}$ "
Dedu_7(#1.
)"]

[$\mathrm{Dedu}_8(\mathsf{p},\mathsf{b}) \stackrel{\text{tex}}{\to}$ "
Dedu_8(#1.
, #2.
)"]

[$\mathrm{Dedu}_8^*(\mathsf{p},\mathsf{b}) \stackrel{\text{tex}}{\to}$ "
Dedu_8^*(#1.
, #2.
)"]

[$\mathrm{Ex}_1 \stackrel{\text{tex}}{\to}$ "Ex_{1}"]

[$\mathrm{Ex}_2 \stackrel{\text{tex}}{\to}$ "Ex_{2}"]

[$\mathrm{Ex}_{10} \stackrel{\text{tex}}{\to}$ "Ex_{10}"]

[$\mathrm{Ex}_{20} \stackrel{\text{tex}}{\to}$ "Ex_{20}"]

[$\mathsf{x}_{\mathrm{Ex}} \stackrel{\text{tex}}{\to}$ "#1.
_{Ex}"]

[$\mathsf{x}^{\mathrm{Ex}} \stackrel{\text{tex}}{\to}$ "#1.
^{Ex}"]

[$\langle \mathsf{x} {\equiv} \mathsf{y} | \mathsf{z} {:==} \mathsf{u} \rangle_{\mathrm{Ex}} \stackrel{\text{tex}}{\to}$ "\langle #1.
{\equiv} #2.
| #3.
{:==} #4.
\rangle_{Ex} "]

[$\langle \mathsf{x} {\equiv}^0 \mathsf{y} | \mathsf{z} {:==} \mathsf{u} \rangle_{\mathrm{Ex}} \stackrel{\text{tex}}{\to}$ "\langle #1.
{\equiv}^0 #2.
| #3.
{:==} #4.
\rangle_{Ex} "]

[$\langle \mathsf{x} {\equiv}^1 \mathsf{y} | \mathsf{z} {:==} \mathsf{u} \rangle_{\mathrm{Ex}} \stackrel{\text{tex}}{\to}$ "\langle #1.
{\equiv}^1 #2.
| #3.
{:==} #4.
\rangle_{Ex} "]

[$\langle \mathsf{x}\equiv^{*}\mathsf{y}|\mathsf{z}{:}{=}{=}\mathsf{u}\rangle_{\mathrm{Ex}} \overset{\mathrm{tex}}{\to}$ “\langle #1.
{\equiv}ˆ∗ #2.
| #3.
{:==} #4.
\rangle_{Ex} ”]

[$\mathrm{ph}_1 \overset{\mathrm{tex}}{\to}$ “ph_{1}”]

[$\mathrm{ph}_2 \overset{\mathrm{tex}}{\to}$ “ph_{2}”]

[$\mathrm{ph}_3 \overset{\mathrm{tex}}{\to}$ “ph_{3}”]

[$\mathrm{ph}_4 \overset{\mathrm{tex}}{\to}$ “ph_{4}”]

[$\mathrm{ph}_5 \overset{\mathrm{tex}}{\to}$ “ph_{5}”]

[$\mathrm{ph}_6 \overset{\mathrm{tex}}{\to}$ “ph_{6}”]

[$*_{\mathrm{Ph}} \overset{\mathrm{tex}}{\to}$ “#1.
_{Ph} ”]

[$\mathsf{x}^{\mathrm{Ph}} \overset{\mathrm{tex}}{\to}$ “#1.
ˆ{Ph}”]

[$\langle \mathsf{x}\equiv\mathsf{y}|\mathsf{z}{:}{=}{=}\mathsf{u}\rangle_{\mathrm{Ph}} \overset{\mathrm{tex}}{\to}$ “\langle #1.
{\equiv} #2.
| #3.
{:==} #4.
\rangle_{Ph} ”]

[$\langle \mathsf{x}\equiv^{0}\mathsf{y}|\mathsf{z}{:}{=}{=}\mathsf{u}\rangle_{\mathrm{Ph}} \overset{\mathrm{tex}}{\to}$ “\langle #1.
{\equiv}ˆ0 #2.
| #3.
{:==} #4.
\rangle_{Ph} ”]

[$\langle \mathsf{x}\equiv^{1}\mathsf{y}|\mathsf{z}{:}{=}{=}\mathsf{u}\rangle_{\mathrm{Ph}} \overset{\mathrm{tex}}{\to}$ “\langle #1.
{\equiv}ˆ1 #2.
| #3.
{:==} #4.
\rangle_{Ph} ”]

[$\langle \mathsf{x}\equiv^{*}\mathsf{y}|\mathsf{z}{:}{=}{=}\mathsf{u}\rangle_{\mathrm{Ph}} \overset{\mathrm{tex}}{\to}$ “\langle #1.
{\equiv}ˆ∗ #2.
| #3.
{:==} #4.
\rangle_{Ph} ”]

[$\mathsf{bs} \stackrel{\text{tex}}{\rightarrow}$ “\mathsf {bs}”]

[$\mathsf{OBS} \stackrel{\text{tex}}{\rightarrow}$ “ \mathsf {OBS}”]

[$\mathcal{BS} \stackrel{\text{tex}}{\rightarrow}$ “{\cal BS}”]

[$\mathrm{Ø} \stackrel{\text{tex}}{\rightarrow}$ “\mathrm{\O}”]

[SystemQ $\stackrel{\text{tex}}{\rightarrow}$ “SystemQ”]

[MP $\stackrel{\text{tex}}{\rightarrow}$ “MP”]

[Gen $\stackrel{\text{tex}}{\rightarrow}$ “Gen”]

[Repetition $\stackrel{\text{tex}}{\rightarrow}$ “Repetition”]

[Neg $\stackrel{\text{tex}}{\rightarrow}$ “Neg”]

[Ded $\stackrel{\text{tex}}{\rightarrow}$ “Ded”]

[ExistIntro $\stackrel{\text{tex}}{\rightarrow}$ “ExistIntro”]

[Extensionality $\stackrel{\text{tex}}{\rightarrow}$ “Extensionality”]

[Ødef $\stackrel{\text{tex}}{\rightarrow}$ “\O{}def”]

[PairDef $\stackrel{\text{tex}}{\rightarrow}$ “PairDef”]

[UnionDef $\stackrel{\text{tex}}{\rightarrow}$ “UnionDef”]

[PowerDef $\stackrel{\text{tex}}{\rightarrow}$ “PowerDef”]

[SeparationDef $\stackrel{\text{tex}}{\rightarrow}$ “SeparationDef”]

[AddDoubleNeg $\stackrel{\text{tex}}{\rightarrow}$ “AddDoubleNeg”]

[RemoveDoubleNeg $\stackrel{\text{tex}}{\rightarrow}$ “RemoveDoubleNeg”]

[AndCommutativity $\stackrel{\text{tex}}{\rightarrow}$ “AndCommutativity”]

[AutoImply $\stackrel{\text{tex}}{\rightarrow}$ “AutoImply”]

[Contrapositive $\stackrel{\text{tex}}{\rightarrow}$ “Contrapositive”]

[FirstConjunct $\stackrel{\text{tex}}{\rightarrow}$ “FirstConjunct”]

[SecondConjunct $\stackrel{\text{tex}}{\rightarrow}$ “SecondConjunct”]

[FromContradiction $\stackrel{\text{tex}}{\rightarrow}$ “FromContradiction”]

[FromDisjuncts $\stackrel{\text{tex}}{\to}$ "FromDisjuncts"]

[IffCommutativity $\stackrel{\text{tex}}{\to}$ "IffCommutativity"]

[IffFirst $\stackrel{\text{tex}}{\to}$ "IffFirst"]

[IffSecond $\stackrel{\text{tex}}{\to}$ "IffSecond"]

[ImplyTransitivity $\stackrel{\text{tex}}{\to}$ "ImplyTransitivity"]

[JoinConjuncts $\stackrel{\text{tex}}{\to}$ "JoinConjuncts"]

[MP2 $\stackrel{\text{tex}}{\to}$ "MP2"]

[MP3 $\stackrel{\text{tex}}{\to}$ "MP3"]

[MP4 $\stackrel{\text{tex}}{\to}$ "MP4"]

[MP5 $\stackrel{\text{tex}}{\to}$ "MP5"]

[MT $\stackrel{\text{tex}}{\to}$ "MT"]

[NegativeMT $\stackrel{\text{tex}}{\to}$ "NegativeMT"]

[Technicality $\stackrel{\text{tex}}{\to}$ "Technicality"]

[Weakening $\stackrel{\text{tex}}{\to}$ "Weakening"]

[WeakenOr1 $\stackrel{\text{tex}}{\to}$ "WeakenOr1"]

[WeakenOr2 $\stackrel{\text{tex}}{\to}$ "WeakenOr2"]

[Pair2Formula $\stackrel{\text{tex}}{\to}$ "Pair2Formula"]

[Formula2Pair $\stackrel{\text{tex}}{\to}$ "Formula2Pair"]

[Union2Formula $\stackrel{\text{tex}}{\to}$ "Union2Formula"]

[Formula2Union $\stackrel{\text{tex}}{\to}$ "Formula2Union"]

[Formula2Power $\stackrel{\text{tex}}{\to}$ "Formula2Power"]

[Sep2Formula $\stackrel{\text{tex}}{\to}$ "Sep2Formula"]

[Formula2Sep $\stackrel{\text{tex}}{\to}$ "Formula2Sep"]

[SubsetInPower $\stackrel{\text{tex}}{\to}$ "SubsetInPower"]

[HelperPowerIsSub $\stackrel{\text{tex}}{\to}$ "HelperPowerIsSub"]

[PowerIsSub $\stackrel{\text{tex}}{\rightarrow}$ “PowerIsSub”]

[(Switch)HelperPowerIsSub $\stackrel{\text{tex}}{\rightarrow}$ “(Switch)HelperPowerIsSub”]

[(Switch)PowerIsSub $\stackrel{\text{tex}}{\rightarrow}$ “(Switch)PowerIsSub”]

[ToSetEquality $\stackrel{\text{tex}}{\rightarrow}$ “ToSetEquality”]

[HelperToSetEquality(t) $\stackrel{\text{tex}}{\rightarrow}$ “HelperToSetEquality(t)”]

[ToSetEquality(t) $\stackrel{\text{tex}}{\rightarrow}$ “ToSetEquality(t)”]

[HelperFromSetEquality $\stackrel{\text{tex}}{\rightarrow}$ “HelperFromSetEquality”]

[FromSetEquality $\stackrel{\text{tex}}{\rightarrow}$ “FromSetEquality”]

[HelperReflexivity $\stackrel{\text{tex}}{\rightarrow}$ “HelperReflexivity”]

[Reflexivity $\stackrel{\text{tex}}{\rightarrow}$ “Reflexivity”]

[HelperSymmetry $\stackrel{\text{tex}}{\rightarrow}$ “HelperSymmetry”]

[Symmetry $\stackrel{\text{tex}}{\rightarrow}$ “Symmetry”]

[HelperTransitivity $\stackrel{\text{tex}}{\rightarrow}$ “HelperTransitivity”]

[Transitivity $\stackrel{\text{tex}}{\rightarrow}$ “Transitivity”],

[ERisReflexive $\stackrel{\text{tex}}{\rightarrow}$ “ERisReflexive”]

[ERisSymmetric $\stackrel{\text{tex}}{\rightarrow}$ “ERisSymmetric”]

[ERisTransitive $\stackrel{\text{tex}}{\rightarrow}$ “ERisTransitive”]

[ØisSubset $\stackrel{\text{tex}}{\rightarrow}$ “\O{}isSubset”]

[HelperMemberNotØ $\stackrel{\text{tex}}{\rightarrow}$ “HelperMemberNot\O{}”]

[MemberNotØ $\stackrel{\text{tex}}{\rightarrow}$ “MemberNot\O{}”]

[HelperUniqueØ $\stackrel{\text{tex}}{\rightarrow}$ “HelperUnique\O{}”]

[UniqueØ $\stackrel{\text{tex}}{\rightarrow}$ “Unique\O{}”]

[==Reflexivity $\stackrel{\text{tex}}{\rightarrow}$ “==\!{}Reflexivity”]

[==Symmetry $\stackrel{\text{tex}}{\rightarrow}$ “==\!{}Symmetry”]

[Helper==Transitivity $\stackrel{\text{tex}}{\rightarrow}$ “Helper\!{}==\!{}Transitivity”]

[==Transitivity $\stackrel{\text{tex}}{\to}$ “\!{}==\!{}Transitivity”]

[HelperTransferNotEq $\stackrel{\text{tex}}{\to}$ “HelperTransferNotEq”]

[TransferNotEq $\stackrel{\text{tex}}{\to}$ “TransferNotEq”]

[HelperPairSubset $\stackrel{\text{tex}}{\to}$ “HelperPairSubset”]

[Helper(2)PairSubset $\stackrel{\text{tex}}{\to}$ “Helper(2)PairSubset”]

[PairSubset $\stackrel{\text{tex}}{\to}$ “PairSubset”]

[SamePair $\stackrel{\text{tex}}{\to}$ “SamePair”]

[SameSingleton $\stackrel{\text{tex}}{\to}$ “SameSingleton”]

[UnionSubset $\stackrel{\text{tex}}{\to}$ “UnionSubset”]

[SameUnion $\stackrel{\text{tex}}{\to}$ “SameUnion”]

[SeparationSubset $\stackrel{\text{tex}}{\to}$ “SeparationSubset”]

[SameSeparation $\stackrel{\text{tex}}{\to}$ “SameSeparation”]

[SameBinaryUnion $\stackrel{\text{tex}}{\to}$ “SameBinaryUnion”]

[IntersectionSubset $\stackrel{\text{tex}}{\to}$ “IntersectionSubset”]

[SameIntersection $\stackrel{\text{tex}}{\to}$ “SameIntersection”]

[AutoMember $\stackrel{\text{tex}}{\to}$ “AutoMember”]

[HelperEqSysNotØ $\stackrel{\text{tex}}{\to}$ “HelperEqSysNot\O{}”]

[EqSysNotØ $\stackrel{\text{tex}}{\to}$ “EqSysNot\O{}”]

[HelperEqSubset $\stackrel{\text{tex}}{\to}$ “HelperEqSubset”]

[EqSubset $\stackrel{\text{tex}}{\to}$ “EqSubset”]

[EqNecessary $\stackrel{\text{tex}}{\to}$ “EqNecessary”]

[HelperEqNecessary $\stackrel{\text{tex}}{\to}$ “HelperEqNecessary”]

[HelperNoneEqNecessary $\stackrel{\text{tex}}{\to}$ “HelperNoneEqNecessary”]

[Helper(2)NoneEqNecessary $\stackrel{\text{tex}}{\to}$ “Helper(2)NoneEqNecessary”]

[NoneEqNecessary $\stackrel{\text{tex}}{\to}$ “NoneEqNecessary”]

[EqClassIsSubset $\stackrel{\text{tex}}{\rightarrow}$ "EqClassIsSubset"]

[EqClassesAreDisjoint $\stackrel{\text{tex}}{\rightarrow}$ "EqClassesAreDisjoint"]

[AllDisjoint $\stackrel{\text{tex}}{\rightarrow}$ "AllDisjoint"]

[AllDisjointImply $\stackrel{\text{tex}}{\rightarrow}$ "AllDisjointImply"]

[BSsubset $\stackrel{\text{tex}}{\rightarrow}$ "BSsubset"]

[Union(BS/R)subset $\stackrel{\text{tex}}{\rightarrow}$ "Union(BS/R)subset"]

[UnionIdentity $\stackrel{\text{tex}}{\rightarrow}$ "UnionIdentity"]

[EqSysIsPartition $\stackrel{\text{tex}}{\rightarrow}$ "EqSysIsPartition"]

[x/y $\stackrel{\text{tex}}{\rightarrow}$ "#1.
/ #2."]

[x ∩ y $\stackrel{\text{tex}}{\rightarrow}$ "#1.
\cap #2."]

[∪x $\stackrel{\text{tex}}{\rightarrow}$ "\cup #1."]

[x ∪ y $\stackrel{\text{tex}}{\rightarrow}$ "#1.
\mathrel{\cup} #2."]

[P(x) $\stackrel{\text{tex}}{\rightarrow}$ "P(#1.
)"]

[{x} $\stackrel{\text{tex}}{\rightarrow}$ "\{#1.
\}"]

[{x, y} $\stackrel{\text{tex}}{\rightarrow}$ "\{#1.
, #2.
\}"]

[⟨x, y⟩ $\stackrel{\text{tex}}{\rightarrow}$ "\langle #1.
, #2.
\rangle"],

[x ∈ y $\stackrel{\text{tex}}{\rightarrow}$ "#1.
\mathrel{\in} #2."]

[z(x, y) $\stackrel{\text{tex}}{\rightarrow}$ "#3.
(#1.
, #2.
)"]

[ReflRel(r, x) $\stackrel{\text{tex}}{\to}$ “ReflRel(#1.
, #2.
)”]

[SymRel(r, x) $\stackrel{\text{tex}}{\to}$ “SymRel(#1.
, #2.
)”]

[TransRel(r, x) $\stackrel{\text{tex}}{\to}$ “TransRel(#1.
, #2.
)”]

[EqRel(r, x) $\stackrel{\text{tex}}{\to}$ “EqRel(#1.
, #2.
)”]

[$[\mathsf{x} \in \mathsf{bs}]_{\mathsf{r}}$ $\stackrel{\text{tex}}{\to}$ “[#1.
\mathrel{\in} #2.
]_{#3.
}”]

[Partition(x, y) $\stackrel{\text{tex}}{\to}$ “Partition(#1.
, #2.
)”]

[$\mathsf{x} {==} \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
\!\mathrel{==}\! #2.”]

[$\mathsf{x} \subseteq \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
\mathrel{\subseteq} #2.”]

[$\dot{\neg}\,(\mathsf{x})$n $\stackrel{\text{tex}}{\to}$ “\dot{\neg}\, (#1.
)n”]

[$\mathsf{x} \notin \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
\mathrel{\notin} #2.”]

[$\mathsf{x} \neq \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
\mathrel{\neq} #2.”]

[$\mathsf{x} \mathrel{\dot{\wedge}} \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
\mathrel{\dot{\wedge}} #2.”]

[$\mathsf{x} \mathrel{\dot{\vee}} \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
\mathrel{\dot{\vee}} #2.”]

[$\mathsf{x} \mathrel{\dot{\Leftrightarrow}} \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
\mathrel{\dot{\Leftrightarrow}} #2.”]

[$\{ph \in \mathsf{x} \mid \mathsf{a}\}$ $\stackrel{\text{tex}}{\to}$ “ \{ ph \mathrel{\in} #1.
\mid #2.
\}”]

[$\mathsf{x} \Rightarrow \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “(i#1.
\Rightarrow #2.
)i”]

[$\text{Nat}(\mathsf{x})$ $\stackrel{\text{tex}}{\to}$ “Nat(#1.
)”]

[$\langle \mathsf{x}{\equiv}\mathsf{y}|\mathsf{z}{:==}\mathsf{u}\rangle_{\text{Me}}$ $\stackrel{\text{tex}}{\to}$ “\langle #1.
{\equiv} #2.
| #3.
{:==} #4.
\rangle_{Me}”]

[$\langle \mathsf{x}{\equiv}^1\mathsf{y}|\mathsf{z}{:==}\mathsf{u}\rangle_{\text{Me}}$ $\stackrel{\text{tex}}{\to}$ “\langle #1.
{\equiv}^1 #2.
| #3.
{:==} #4.
\rangle_{Me} ”]

[$\langle \mathsf{x}{\equiv}^*\mathsf{y}|\mathsf{z}{:==}\mathsf{u}\rangle_{\text{Me}}$ $\stackrel{\text{tex}}{\to}$ “\langle #1.
{\equiv}^∗ #2.
| #3.
{:==} #4.
\rangle_{Me} ”]

[$\exists \mathsf{x}\colon \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “
\exists #1.
\colon #2.”]

[(x1) $\stackrel{\text{tex}}{\to}$ “(x1)”]

[(x2) $\stackrel{\text{tex}}{\to}$ “(x2)”]

[(y1) $\stackrel{\text{tex}}{\to}$ “(y1)”]

[(y2) $\stackrel{\text{tex}}{\to}$ “(y2)”]

[(v1) $\stackrel{\text{tex}}{\to}$ “(v1)”]

[(v2) $\stackrel{\text{tex}}{\to}$ “(v2)”]

[(v3) $\stackrel{\text{tex}}{\to}$ “(v3)”]

[(v4) $\stackrel{\text{tex}}{\to}$ “(v4)”]

$[(v2n) \stackrel{\text{tex}}{\to}$ "(v2n)"]

$[(n1) \stackrel{\text{tex}}{\to}$ "(n1)"]

$[(n2) \stackrel{\text{tex}}{\to}$ "(n2)"]

$[(n3) \stackrel{\text{tex}}{\to}$ "(n3)"]

$[(m1) \stackrel{\text{tex}}{\to}$ "(m1)"]

$[(m2) \stackrel{\text{tex}}{\to}$ "(m2)"]

$[(\epsilon) \stackrel{\text{tex}}{\to}$ "(\epsilon)"]

$[(\epsilon)_1 \stackrel{\text{tex}}{\to}$ "(\epsilon)_{1}"]

$[(\epsilon 2) \stackrel{\text{tex}}{\to}$ "(\epsilon 2)"]

$[(fx) \stackrel{\text{tex}}{\to}$ "(fx)"]

$[(fy) \stackrel{\text{tex}}{\to}$ "(fy)"]

$[(fz) \stackrel{\text{tex}}{\to}$ "(fz)"]

$[(fu) \stackrel{\text{tex}}{\to}$ "(fu)"]

$[(fv) \stackrel{\text{tex}}{\to}$ "(fv)"]

$[(fw) \stackrel{\text{tex}}{\to}$ "(fw)"]

$[(fep) \stackrel{\text{tex}}{\to}$ "(fep)"]

$[(rx) \stackrel{\text{tex}}{\to}$ "(rx)"]

$[(ry) \stackrel{\text{tex}}{\to}$ "(ry)"]

$[(rz) \stackrel{\text{tex}}{\to}$ "(rz)"]

$[(ru) \stackrel{\text{tex}}{\to}$ "(ru)"]

$[(sx) \stackrel{\text{tex}}{\to}$ "(sx)"]

$[(sx1) \stackrel{\text{tex}}{\to}$ "(sx1)"]

$[(sy) \stackrel{\text{tex}}{\to}$ "(sy)"]

$[(sy1) \stackrel{\text{tex}}{\to}$ "(sy1)"]

$[(sz) \stackrel{\text{tex}}{\to}$ "(sz)"]

$[(\mathrm{sz1}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(sz1)"$]$

$[(\mathrm{su}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(su)"$]$

$[(\mathrm{su1}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(su1)"$]$

$[(\mathrm{fxs}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(fxs)"$]$

$[(\mathrm{fys}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(fys)"$]$

$[(\mathrm{crs1}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(crs1)"$]$

$[(\mathrm{f1}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(f1)"$]$

$[(\mathrm{f2}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(f2)"$]$

$[(\mathrm{f3}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(f3)"$]$

$[(\mathrm{f4}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(f4)"$]$

$[(\mathrm{op1}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(op1)"$]$

$[(\mathrm{op2}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(op2)"$]$

$[(\mathrm{r1}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(r1)"$]$

$[(\mathrm{s1}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(s1)"$]$

$[(\mathrm{s2}) \stackrel{\mathrm{tex}}{\rightarrow}$ "(s2)"$]$

$[\mathrm{X}_1 \stackrel{\mathrm{tex}}{\rightarrow}$ "X_{1}"$]$

$[\mathrm{X}_2 \stackrel{\mathrm{tex}}{\rightarrow}$ "X_{2}"$]$

$[\mathrm{Y}_1 \stackrel{\mathrm{tex}}{\rightarrow}$ "Y_{1}"$]$

$[\mathrm{Y}_2 \stackrel{\mathrm{tex}}{\rightarrow}$ "Y_{2}"$]$

$[\mathrm{V}_1 \stackrel{\mathrm{tex}}{\rightarrow}$ "V_{1}"$]$

$[\mathrm{V}_2 \stackrel{\mathrm{tex}}{\rightarrow}$ "V_{2}"$]$

$[\mathrm{V}_3 \stackrel{\mathrm{tex}}{\rightarrow}$ "V_{3}"$]$

$[\mathrm{V}_4 \stackrel{\mathrm{tex}}{\rightarrow}$ "V_{4}"$]$

$[\mathrm{V}_{2\mathrm{n}} \stackrel{\mathrm{tex}}{\rightarrow}$ "V_{2n}"$]$

$[\epsilon \stackrel{\mathrm{tex}}{\rightarrow}$ "\epsilon"$]$

$[M_1 \overset{tex}{\rightarrow}$ "M_{1}"]

$[M_2 \overset{tex}{\rightarrow}$ "M_{2}"]

$[N_1 \overset{tex}{\rightarrow}$ "N_{1} "]

$[N_2 \overset{tex}{\rightarrow}$ "N_{2} "]

$[N_3 \overset{tex}{\rightarrow}$ "N_{3} "]

$[\epsilon 1 \overset{tex}{\rightarrow}$ "\epsilon 1"]

$[\epsilon 2 \overset{tex}{\rightarrow}$ "\epsilon 2"]

[FX $\overset{tex}{\rightarrow}$ "FX"]

[FY $\overset{tex}{\rightarrow}$ "FY"]

[FZ $\overset{tex}{\rightarrow}$ "FZ"]

[FU $\overset{tex}{\rightarrow}$ "FU"]

[FV $\overset{tex}{\rightarrow}$ "FV"]

[FW $\overset{tex}{\rightarrow}$ "FW"]

[FEP $\overset{tex}{\rightarrow}$ "FEP"]

[RX $\overset{tex}{\rightarrow}$ "RX"]

[RY $\overset{tex}{\rightarrow}$ "RY"]

[RZ $\overset{tex}{\rightarrow}$ "RZ"]

[RU $\overset{tex}{\rightarrow}$ "RU"]

[(SX) $\overset{tex}{\rightarrow}$ "(SX)"]

[(SX1) $\overset{tex}{\rightarrow}$ "(SX1)"]

[(SY) $\overset{tex}{\rightarrow}$ "(SY)"]

[(SY1) $\overset{tex}{\rightarrow}$ "(SY1)"]

[(SZ) $\overset{tex}{\rightarrow}$ "(SZ)"]

[(SZ1) $\overset{tex}{\rightarrow}$ "(SZ1)"]

[(SU) $\overset{tex}{\rightarrow}$ "(SU)"]

[(SU1) $\overset{\text{tex}}{\rightarrow}$ "(SU1)"]

[FXS $\overset{\text{tex}}{\rightarrow}$ "FXS"]

[FYS $\overset{\text{tex}}{\rightarrow}$ "FYS"]

[(F1) $\overset{\text{tex}}{\rightarrow}$ "(F1)"]

[(F2) $\overset{\text{tex}}{\rightarrow}$ "(F2)"]

[(F3) $\overset{\text{tex}}{\rightarrow}$ "(F3)"]

[(F4) $\overset{\text{tex}}{\rightarrow}$ "(F4)"]

[(OP1) $\overset{\text{tex}}{\rightarrow}$ "(OP1)"]

[(OP2) $\overset{\text{tex}}{\rightarrow}$ "(OP2)"]

[(R1) $\overset{\text{tex}}{\rightarrow}$ "(R1)"]

[(S1) $\overset{\text{tex}}{\rightarrow}$ "(S1)"]

[(S2) $\overset{\text{tex}}{\rightarrow}$ "(S2)"]

[(EPob) $\overset{\text{tex}}{\rightarrow}$ "(EPob)"]

[(CRS1ob) $\overset{\text{tex}}{\rightarrow}$ "(CRS1ob)"]

[(F1ob) $\overset{\text{tex}}{\rightarrow}$ "(F1ob)"]

[(F2ob) $\overset{\text{tex}}{\rightarrow}$ "(F2ob)"]

[(F3ob) $\overset{\text{tex}}{\rightarrow}$ "(F3ob)"]

[(F4ob) $\overset{\text{tex}}{\rightarrow}$ "(F4ob)"]

[(N1ob) $\overset{\text{tex}}{\rightarrow}$ "(N1ob)"]

[(N2ob) $\overset{\text{tex}}{\rightarrow}$ "(N2ob)"]

[(OP1ob) $\overset{\text{tex}}{\rightarrow}$ "(OP1ob)"]

[(OP2ob) $\overset{\text{tex}}{\rightarrow}$ "(OP2ob)"]

[(R1ob) $\overset{\text{tex}}{\rightarrow}$ "(R1ob)"]

[(S1ob) $\overset{\text{tex}}{\rightarrow}$ "(S1ob)"]

[(S2ob) $\overset{\text{tex}}{\rightarrow}$ "(S2ob)"]

[Ex3 $\stackrel{\text{tex}}{\to}$ "Ex3"]

[NAT $\stackrel{\text{tex}}{\to}$ "NAT"]

[RATIONAL$_{\text{S}}$ERIES $\stackrel{\text{tex}}{\to}$ "RATIONAL_SERIES"]

[SERIES $\stackrel{\text{tex}}{\to}$ "SERIES"]

[SetOfReals $\stackrel{\text{tex}}{\to}$ "SetOfReals"]

[SetOfFxs $\stackrel{\text{tex}}{\to}$ "SetOfFxs"]

[N $\stackrel{\text{tex}}{\to}$ "N"]

[Q $\stackrel{\text{tex}}{\to}$ "Q"]

[X $\stackrel{\text{tex}}{\to}$ "X"]

[xs $\stackrel{\text{tex}}{\to}$ "xs"]

[xaF $\stackrel{\text{tex}}{\to}$ "xaF"]

[ysF $\stackrel{\text{tex}}{\to}$ "ysF"]

[us $\stackrel{\text{tex}}{\to}$ "us"]

[usFoelge $\stackrel{\text{tex}}{\to}$ "usFoelge"]

[0 $\stackrel{\text{tex}}{\to}$ "0"]

[1 $\stackrel{\text{tex}}{\to}$ "1"]

[(-1) $\stackrel{\text{tex}}{\to}$ "(-1)"]

[2 $\stackrel{\text{tex}}{\to}$ "2"]

[3 $\stackrel{\text{tex}}{\to}$ "3"]

[1/2 $\stackrel{\text{tex}}{\to}$ "1/2"]

[1/3 $\stackrel{\text{tex}}{\to}$ "1/3"]

[2/3 $\stackrel{\text{tex}}{\to}$ "2/3"]

[0f $\stackrel{\text{tex}}{\to}$ "0f"]

[00 $\stackrel{\text{tex}}{\to}$ "00"]

[$(--01)$ $\stackrel{\text{tex}}{\to}$ "(--01)"]

[02 $\stackrel{\text{tex}}{\to}$ “02”]

[01//02 $\stackrel{\text{tex}}{\to}$ “01//02”]

[$\mathsf{x} = \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
= #2.”]

[$\mathsf{x} \neq \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
\neq #2.”]

[$\mathsf{x} < \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
< #2.”]

[$\mathsf{x} <= \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
<= #2.”]

[$\mathsf{x} <_{\mathrm{f}} \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
<_{f}#2.”]

[$\mathsf{x} \leq_{\mathrm{f}} \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
\leq_{f}#2.”]

[$\mathrm{SF}(\mathsf{x}, \mathsf{y})$ $\stackrel{\text{tex}}{\to}$ “SF(#1.
, #2.
)”]

[$\mathsf{x} == \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
== #2.”]

[$\mathsf{x}!! == \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
!!== #2.”]

[$\mathsf{x} << \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
<< #2.”]

[$\mathsf{x} <<== \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ “#1.
<<== #2.”]

[$\mathsf{x}[\mathsf{y}]$ $\stackrel{\text{tex}}{\to}$ “#1.
[#2.
]”]

[$(-\mathrm{u}\mathsf{x})$ $\stackrel{\text{tex}}{\to}$ “(-u#1.
)”]

[$-_{\mathrm{f}}\mathsf{x}$ $\stackrel{\text{tex}}{\to}$ “-_{f}#1.”]

$[(--\mathsf{x}) \stackrel{\text{tex}}{\to}$ “(--#1.
)”]

$[1\text{f}/\mathsf{x} \stackrel{\text{tex}}{\to}$ “1f/#1.”]

$[01//\text{temp}\mathsf{x} \stackrel{\text{tex}}{\to}$ “01//temp#1.”]

$[(\mathsf{x}+\mathsf{y}) \stackrel{\text{tex}}{\to}$ “(#1.
+#2.
)”]

$[(\mathsf{x}-\mathsf{y}) \stackrel{\text{tex}}{\to}$ “(#1.
-#2.
)”]

$[(\text{fx}) +_{\text{f}} (\text{fy}) \stackrel{\text{tex}}{\to}$ “#1.
+_{f}#2.”]

$[(\text{fx}) -_{\text{f}} (\text{fy}) \stackrel{\text{tex}}{\to}$ “#1.
-_{f}#2.”]

$[(\text{fx}) *_{\text{f}} (\text{fy}) \stackrel{\text{tex}}{\to}$ “#1.
*_{f}#2.”]

$[\mathsf{x}++\mathsf{y} \stackrel{\text{tex}}{\to}$ “#1.
++#2.”]

$[\text{R}((\text{fx}))--\text{R}((\text{fy})) \stackrel{\text{tex}}{\to}$ “R(#1.
) -- R(#2.
)”]

$[(\mathsf{x}*\mathsf{y}) \stackrel{\text{tex}}{\to}$ “(#1.
*#2.
)”]

$[\mathsf{x}**\mathsf{y} \stackrel{\text{tex}}{\to}$ “#1.
**#2.”]

$[\mathsf{x}(\text{exp})\mathsf{y} \stackrel{\text{tex}}{\to}$ “ #1.
(exp) #2.”]

$[\text{leqReflexivity} \stackrel{\text{tex}}{\to}$ “leqReflexivity”]

$[\text{rec}\mathsf{x} \stackrel{\text{tex}}{\to}$ “rec#1.”]

$[|\mathsf{x}| \stackrel{\text{tex}}{\to}$ “|#1.
|”]

[StateExpand($\mathsf{t}, \mathsf{s}, \mathsf{c}$) $\stackrel{\text{tex}}{\to}$ “StateExpand(#1.
, #2.
, #3.
)”]

[extractSeries(t) $\stackrel{\text{tex}}{\to}$ “extractSeries(#1.
)”]

[|fx| $\stackrel{\text{tex}}{\to}$ “|f#1.
|”]

[|rx| $\stackrel{\text{tex}}{\to}$ “|r#1.
|”]

[SetOfSeries(x) $\stackrel{\text{tex}}{\to}$ “SetOfSeries(#1.
)”]

[ExpandList($\mathsf{x}, \mathsf{y}, \mathsf{z}$) $\stackrel{\text{tex}}{\to}$ “ExpandList(#1.
, #2.
, #3.
)”]

[$* *$ Macro(x) $\stackrel{\text{tex}}{\to}$ “**Macro(#1.
)”]

[$+ +$ Macro(x) $\stackrel{\text{tex}}{\to}$ “++Macro(#1.
)”]

[$- -$ Macro(x) $\stackrel{\text{tex}}{\to}$ “--Macro(#1.
)”]

[$<<$ Macro(x) $\stackrel{\text{tex}}{\to}$ “<<Macro(#1.
)”]

[||Macro(x) $\stackrel{\text{tex}}{\to}$ “||Macro(#1.
)”]

[01//Macro(x) $\stackrel{\text{tex}}{\to}$ “01//Macro(#1.
)”]

[Max(x, y) $\stackrel{\text{tex}}{\to}$ “Max(#1.
, #2.
)”]

[Max(x, y) $\stackrel{\text{tex}}{\to}$ “Max(#1.
, #2.
)”]

[Limit(x, y) $\stackrel{\text{tex}}{\to}$ "Limit(#1.
, #2.
)"]

[Union(x) $\stackrel{\text{tex}}{\to}$ "Union(#1.
)"]

[if(x, y, z) $\stackrel{\text{tex}}{\to}$ "if(#1.
, #2.
, #3.
)"]

[IsOrderedPair(x, y, z) $\stackrel{\text{tex}}{\to}$ "IsOrderedPair(#1.
, #2.
, #3.
)"]

[IsRelation(x, y, z) $\stackrel{\text{tex}}{\to}$ "IsRelation(#1.
, #2.
, #3.
)"]

[isFunction(x, y, z) $\stackrel{\text{tex}}{\to}$ "isFunction(#1.
, #2.
, #3.
)"]

[TypeNat(x) $\stackrel{\text{tex}}{\to}$ "TypeNat(#1.
)"]

[TypeNat0(x) $\stackrel{\text{tex}}{\to}$ "TypeNat0(#1.
)"]

[TypeRational(x) $\stackrel{\text{tex}}{\to}$ "TypeRational(#1.
)"]

[TypeRational0(x) $\stackrel{\text{tex}}{\to}$ "TypeRational0(#1.
)"]

[TypeSeries(x, y) $\stackrel{\text{tex}}{\to}$ "TypeSeries(#1.
, #2.
)"]

[Typeseries0(x, y) $\stackrel{\text{tex}}{\to}$ "Typeseries0(#1.
, #2.
)"]

[UB(x, y) $\stackrel{\text{tex}}{\to}$ "UB(#1.
, #2.
)"]

[LUB(x, y) $\stackrel{\text{tex}}{\to}$ "LUB(#1.
, #2.
)"]

[BS(x, y) $\stackrel{\text{tex}}{\to}$ "BS(#1.
, #2.
)"]

[UStelescope(x, y) $\stackrel{\text{tex}}{\to}$ "UStelescope(#1.
, #2.
)"]

[(x) $\stackrel{\text{tex}}{\to}$ "(#1.
)"]

[R(x) $\stackrel{\text{tex}}{\to}$ "R(#1.
)"]

[− − R(x) $\stackrel{\text{tex}}{\to}$ "--R(#1.
)"]

[IsSeries(x, y) $\stackrel{\text{tex}}{\to}$ "IsSeries(#1.
, #2.
)"]

[IsNatural(xy, ∗) $\stackrel{\text{tex}}{\to}$ "IsNatural(#1.
, #2.
)"]

[OrderedPair(x, y) $\stackrel{\text{tex}}{\to}$ "OrderedPair(#1.
, #2.
)"]

[leqAntisymmetryAxiom $\stackrel{\text{tex}}{\to}$ "leqAntisymmetryAxiom"]

[leqTransitivityAxiom $\stackrel{\text{tex}}{\to}$ "leqTransitivityAxiom"]

[leqTotality $\stackrel{\text{tex}}{\to}$ "leqTotality"]

[leqAdditionAxiom $\stackrel{\text{tex}}{\to}$ "leqAdditionAxiom"]

[leqMultiplicationAxiom $\stackrel{\text{tex}}{\to}$ "leqMultiplicationAxiom"]

[plusAssociativity $\stackrel{\text{tex}}{\to}$ "plusAssociativity"] [plusCommutativity $\stackrel{\text{tex}}{\to}$ "plusCommutativity"]

[Negative $\stackrel{\text{tex}}{\to}$ "Negative"]

[plus0 $\stackrel{\text{tex}}{\to}$ "plus0"]

[timesAssociativity $\stackrel{\text{tex}}{\to}$ "timesAssociativity"]

[timesCommutativity $\stackrel{\text{tex}}{\to}$ "timesCommutativity"]

[ReciprocalAxiom $\stackrel{\text{tex}}{\to}$ "ReciprocalAxiom"]

[times1 $\stackrel{\text{tex}}{\to}$ "times1"]

[plusAssociativity $\stackrel{\text{tex}}{\to}$ "plusAssociativity"]

[plusCommutativity $\stackrel{\text{tex}}{\to}$ "plusCommutativity"]

[Negative $\stackrel{\text{tex}}{\to}$ "Negative"]

[Distribution $\stackrel{\text{tex}}{\to}$ "Distribution"]

[0not1 $\stackrel{\text{tex}}{\to}$ "0not1"]

[A4(Axiom) $\stackrel{\text{tex}}{\to}$ "A4(Axiom)"]

[InductionAxiom $\stackrel{\text{tex}}{\to}$ "InductionAxiom"]

[EqualityAxiom $\stackrel{\text{tex}}{\to}$ "EqualityAxiom"]

[EqLeqAxiom $\stackrel{\text{tex}}{\to}$ "EqLeqAxiom"]

[EqAdditionAxiom $\stackrel{\text{tex}}{\to}$ "EqAdditionAxiom"]

[EqMultiplicationAxiom $\stackrel{\text{tex}}{\to}$ "EqMultiplicationAxiom"]

[SENC1 $\stackrel{\text{tex}}{\to}$ "SENC1"]

[SENC2 $\stackrel{\text{tex}}{\to}$ "SENC2"]

[Cauchy $\stackrel{\text{tex}}{\to}$ "Cauchy"]

[PlusF $\stackrel{\text{tex}}{\to}$ "PlusF"]

[ReciprocalF $\stackrel{\text{tex}}{\to}$ "ReciprocalF"]

[From $==\stackrel{\text{tex}}{\to}$ "From=="]

[To $==\stackrel{\text{tex}}{\to}$ "To=="]

[FromInR $\overset{\text{tex}}{\to}$ "FromInR"]

[ReciprocalR(Axiom) $\overset{\text{tex}}{\to}$ "ReciprocalR(Axiom)"]

[US0 $\overset{\text{tex}}{\to}$ "US0"]

[NextXS(UpperBound) $\overset{\text{tex}}{\to}$ "NextXS(UpperBound)"]

[NextXS(NoUpperBound) $\overset{\text{tex}}{\to}$ "NextXS(NoUpperBound)"]

[NextUS(UpperBound) $\overset{\text{tex}}{\to}$ "NextUS(UpperBound)"]

[NextUS(NoUpperBound) $\overset{\text{tex}}{\to}$ "NextUS(NoUpperBound)"]

[ExpZero $\overset{\text{tex}}{\to}$ "ExpZero"]

[ExpPositive $\overset{\text{tex}}{\to}$ "ExpPositive"]

[ExpZero(R) $\overset{\text{tex}}{\to}$ "ExpZero(R)"]

[ExpPositive(R) $\overset{\text{tex}}{\to}$ "ExpPositive(R)"]

[LessMinus1(N) $\overset{\text{tex}}{\to}$ "LessMinus1(N)"]

[Nonnegative(N) $\overset{\text{tex}}{\to}$ "Nonnegative(N)"]

[BSzero $\overset{\text{tex}}{\to}$ "BSzero"]

[BSpositive $\overset{\text{tex}}{\to}$ "BSpositive"]

[UStelescope(Zero) $\overset{\text{tex}}{\to}$ "UStelescope(Zero)"]

[UStelescope(Positive) $\overset{\text{tex}}{\to}$ "UStelescope(Positive)"]

[EqAddition(R) $\overset{\text{tex}}{\to}$ "EqAddition(R)"]

[FromLimit $\overset{\text{tex}}{\to}$ "FromLimit"]

[ToUpperBound $\overset{\text{tex}}{\to}$ "ToUpperBound"]

[FromUpperBound $\overset{\text{tex}}{\to}$ "FromUpperBound"]

[USisUpperBound $\overset{\text{tex}}{\to}$ "USisUpperBound"]

[0not1(R) $\overset{\text{tex}}{\to}$ "0not1(R)"]

[ExpUnbounded(R) $\overset{\text{tex}}{\to}$ "ExpUnbounded(R)"]

[FromLeq(Advanced)(N) $\overset{\text{tex}}{\to}$ "FromLeq(Advanced)(N)"]

[FromLeastUpperBound $\stackrel{\text{tex}}{\to}$ "FromLeastUpperBound"]

[ToLeastUpperBound $\stackrel{\text{tex}}{\to}$ "ToLeastUpperBound"]

[XSisNotUpperBound $\stackrel{\text{tex}}{\to}$ "XSisNotUpperBound"]

[ysFGreater $\stackrel{\text{tex}}{\to}$ "ysFGreater"]

[ysFLess $\stackrel{\text{tex}}{\to}$ "ysFLess"]

[SmallInverse $\stackrel{\text{tex}}{\to}$ "SmallInverse"]

[MemberOfSeries(Imply) $\stackrel{\text{tex}}{\to}$ "MemberOfSeries(Imply)"]

[NatType $\stackrel{\text{tex}}{\to}$ "NatType"]

[RationalType $\stackrel{\text{tex}}{\to}$ "RationalType"]

[SeriesType $\stackrel{\text{tex}}{\to}$ "SeriesType"]

[JoinConjuncts(2conditions) $\stackrel{\text{tex}}{\to}$ "JoinConjuncts(2conditions)"]

[TND $\stackrel{\text{tex}}{\to}$ "TND"]

[FromNegatedImply $\stackrel{\text{tex}}{\to}$ "FromNegatedImply"]

[ToNegatedImply $\stackrel{\text{tex}}{\to}$ "ToNegatedImply"]

[FromNegated($2 * $Imply) $\stackrel{\text{tex}}{\to}$ "FromNegated(2*Imply)"]

[FromNegatedAnd $\stackrel{\text{tex}}{\to}$ "FromNegatedAnd"]

[FromNegatedOr $\stackrel{\text{tex}}{\to}$ "FromNegatedOr"]

[ToNegatedOr $\stackrel{\text{tex}}{\to}$ "ToNegatedOr"]

[FromNegations $\stackrel{\text{tex}}{\to}$ "FromNegations"]

[From3Disjuncts $\stackrel{\text{tex}}{\to}$ "From3Disjuncts"]

[NegateDisjunct1 $\stackrel{\text{tex}}{\to}$ "NegateDisjunct1"]

[NegateDisjunct2 $\stackrel{\text{tex}}{\to}$ "NegateDisjunct2"]

[ExpandDisjuncts $\stackrel{\text{tex}}{\to}$ "ExpandDisjuncts"]

[From$2 * 2$Disjuncts $\stackrel{\text{tex}}{\to}$ "From2*2Disjuncts"]

[PlusR(Sym) $\stackrel{\text{tex}}{\to}$ "PlusR(Sym)"]

[LessLeq(R) $\stackrel{\text{tex}}{\to}$ "LessLeq(R)"]

[LeqAntisymmetry(R) $\stackrel{\text{tex}}{\to}$ "LeqAntisymmetry(R)"]

[LeqTransitivity(R) $\stackrel{\text{tex}}{\to}$ "LeqTransitivity(R)"]

[Plus0(R) $\stackrel{\text{tex}}{\to}$ "Plus0(R)"]

[lessAddition(R) $\stackrel{\text{tex}}{\to}$ "lessAddition(R)"]

[leqAddition(R) $\stackrel{\text{tex}}{\to}$ "leqAddition(R)"]

[PlusAssociativity(R)XX $\stackrel{\text{tex}}{\to}$ "PlusAssociativity(R)XX"]

[PlusAssociativity(R) $\stackrel{\text{tex}}{\to}$ "PlusAssociativity(R)"]

[Negative(R) $\stackrel{\text{tex}}{\to}$ "Negative(R)"]

[PlusCommutativity(R) $\stackrel{\text{tex}}{\to}$ "PlusCommutativity(R)"]

[Times1(R) $\stackrel{\text{tex}}{\to}$ "Times1(R)"]

[TimesAssociativity(R) $\stackrel{\text{tex}}{\to}$ "TimesAssociativity(R)"]

[TimesCommutativity(R) $\stackrel{\text{tex}}{\to}$ "TimesCommutativity(R)"]

[Distribution(R) $\stackrel{\text{tex}}{\to}$ "Distribution(R)"]

[$\exists \mathsf{x}\colon \mathsf{y}$ $\stackrel{\text{tex}}{\to}$ "(AARRGGHH!-exist-bug!)"]

[constantRationalSeries(x) $\stackrel{\text{tex}}{\to}$ "constantRationalSeries(#1.
)"]

[Power(x) $\stackrel{\text{tex}}{\to}$ "Power(#1.
)"]

[cartProd(x) $\stackrel{\text{tex}}{\to}$ "cartProd(#1.
)"]

[binaryUnion(x, y) $\stackrel{\text{tex}}{\to}$ "binaryUnion(#1.
, #2.
)"]

[SetOfRationalSeries $\stackrel{\text{tex}}{\to}$ "SetOfRationalSeries"]

[MemberOfSeries $\stackrel{\text{tex}}{\to}$ "MemberOfSeries"]

$[\mathsf{IsSubset}(\mathsf{x},\mathsf{y}) \stackrel{\text{tex}}{\rightarrow}$ "IsSubset(#1.
, #2.
)"]

$[\text{memberOfSeries(Type)} \stackrel{\text{tex}}{\rightarrow}$ "memberOfSeries(Type)"]

$[\text{UniqueMember} \stackrel{\text{tex}}{\rightarrow}$ "UniqueMember"]

$[\text{UniqueMember(Type)} \stackrel{\text{tex}}{\rightarrow}$ "UniqueMember(Type)"]

$[\text{SameSeries} \stackrel{\text{tex}}{\rightarrow}$ "SameSeries"]

$[\text{A4} \stackrel{\text{tex}}{\rightarrow}$ "A4"]

$[(\mathsf{sx}) \stackrel{\text{tex}}{\rightarrow}$ "(s#1.
)"]

$[(\mathsf{px},\mathsf{y}) \stackrel{\text{tex}}{\rightarrow}$ "(p#1.
, #2.
)"]

$[\text{SameMember} \stackrel{\text{tex}}{\rightarrow}$ "SameMember"]

$[\text{Qclosed(Addition)} \stackrel{\text{tex}}{\rightarrow}$ "Qclosed(Addition)"]

$[\text{Qclosed(Multiplication)} \stackrel{\text{tex}}{\rightarrow}$ "Qclosed(Multiplication)"]

$[\text{FromCartProd(1)} \stackrel{\text{tex}}{\rightarrow}$ "FromCartProd(1)"]

$[\text{FromCartProd(1)} \stackrel{\text{tex}}{\rightarrow}$ "FromCartProd(1)"]

$[\text{Max} \stackrel{\text{tex}}{\rightarrow}$ "Max"]

$[\text{Numerical} \stackrel{\text{tex}}{\rightarrow}$ "Numerical"]

$[\text{NumericalF} \stackrel{\text{tex}}{\rightarrow}$ "NumericalF"]

$[\text{Separation2formula(1)} \stackrel{\text{tex}}{\rightarrow}$ "Separation2formula(1)"]

$[\text{Separation2formula(2)} \stackrel{\text{tex}}{\rightarrow}$ "Separation2formula(2)"]

$[\text{QisClosed(Reciprocal)(Imply)} \stackrel{\text{tex}}{\rightarrow}$ "QisClosed(Reciprocal)(Imply)"]

$[\text{QisClosed(Reciprocal)} \stackrel{\text{tex}}{\rightarrow}$ "QisClosed(Reciprocal)"]

$[\text{QisClosed(Negative)(Imply)} \stackrel{\text{tex}}{\rightarrow}$ "QisClosed(Negative)(Imply)"]

$[\text{QisClosed(Negative)} \stackrel{\text{tex}}{\rightarrow}$ "QisClosed(Negative)"]

[(Adgic)SameR $\stackrel{\text{tex}}{\to}$ “(Adgic)SameR”]