

```

ny—
[x << testy  $\stackrel{\text{tex}}{=}$  “#1.
<<test#2.”]
[<< testMacro(t)  $\stackrel{\text{tex}}{=}$  “<<testMacro(#1.
)”]
([x << testy  $\stackrel{\text{macro}}{\rightarrow}$   $\lambda t.\lambda s.\lambda c.$  << testMacro( $t^h :: \text{ExpandList}(t^t, s, c))])^p$ 
```

[<< testMacro(t) $\stackrel{\text{val}}{\rightarrow}$ $\tilde{Q}(t, [x], ([x] :: t^{222121222111111}) :: T)$]
(*****)

R(a) ++R(b) 1
R(a) ++R(b) ++R(c) 2
(-- R(a)) 3
(-- {ph \in Tester3 | SF(a, Tester4)}) 4
(-- (-- R(a))) 5
(-- (-- (-- (-- R(a))))) 6
R(a) **R(b) 7
R(a *_f b) 8
R(FX) **R(0f) 8a
R(FX *_f 0f) 8b
R(a) **R(b) **R(c) 8
(-- R(a)) **R(b) ++R(c) 9
R(a) **R(b) **R(c) << (-- R(a)) **R(b) ++R(c) 10
(-- (-- (-- (-- R(a))))) << R(b) ++R(b) ++R(c) 11
R(a) 12
R(b) 13
R(a) << R(b) 14
R(a) << testR(b) 15
venter—

Priority table

Preassociative

```
[prove], [base], [bracket * end bracket], [big bracket * end bracket], [ $ * $ ],  

[flush left [*]], [x], [y], [z], [[*  $\bowtie$  *]], [[*  $\rightarrow$  *]], [pyk], [tex], [name], [prio], [*], [ $\top$ ],  

[if(*, *, *)], [[*  $\Rightarrow$  *]], [val], [claim], [ $\perp$ ], [f(*)], [(*) $^I$ ], [ $\mathbb{F}$ ], [ $\mathbb{O}$ ], [ $\mathbb{I}$ ], [ $\mathbb{2}$ ], [ $\mathbb{3}$ ], [ $\mathbb{4}$ ], [ $\mathbb{5}$ ], [ $\mathbb{6}$ ],  

[ $\mathbb{7}$ ], [ $\mathbb{8}$ ], [ $\mathbb{9}$ ], [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], [(*) $^M$ ], [If(*, *, *)],  

[array{*} * end array], [l], [c], [r], [empty], [(* | * := *)], [ $\mathcal{M}$ (*)], [ $\tilde{\mathcal{U}}$ (*)], [ $\mathcal{U}$ (*)],  

[ $\mathcal{U}$  $^M$ (*), [apply(*, *), [apply1(*, *)], [identifier(*)], [identifier1(*, *)], [array-  

plus(*, *)], [array-remove(*, *, *)], [array-put(*, *, *, *)], [array-add(*, *, *, *, *)],  

[bit(*, *)], [bit1(*, *)], [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(*, *, *, *)], [[*]], [ $\mathcal{M}$ (*), [*], [*], [*]], [ $\mathcal{M}_2$ (*), [*], [*], [*]], [ $\mathcal{M}^*$ (*), [*], [*], [*]], [macro],
```

$[s_0]$, $[\text{zip}(*, *)]$, $[\text{assoc}_1(*, *, *)]$, $[(*^{\text{P}})]$, $[\text{self}]$, $[[* \doteq *]]$, $[[* \dot{=} *]]$,
 $[[* \stackrel{\text{pyk}}{=} *]]$, $[[* \stackrel{\text{tex}}{=} *]]$, $[[* \stackrel{\text{name}}{=} *]]$, **Priority table** $[*]$, $[\tilde{\mathcal{M}}_1]$, $[\tilde{\mathcal{M}}_2(*)]$, $[\tilde{\mathcal{M}}_3(*)]$,
 $[\tilde{\mathcal{M}}_4(*, *, *, *)]$, $[\tilde{\mathcal{M}}(*, *, *)]$, $[\tilde{\mathcal{Q}}(*, *, *)]$, $[\tilde{\mathcal{Q}}_2(*, *, *)]$, $[\tilde{\mathcal{Q}}_3(*, *, *, *)]$, $[\tilde{\mathcal{Q}}^*(*, *, *)]$,
 $[(*)]$, $[(*)]$, $[\text{display}(*)]$, $[\text{statement}(*)]$, $[[*]^{\cdot}]$, $[[*]^-]$, **aspect** $(*, *)$,
aspect $(*, *, *)$, $[(*)]$, $[\text{tuple}_1(*)]$, $[\text{tuple}_2(*)]$, $[\text{let}_2(*, *)]$, $[\text{let}_1(*, *)]$,
 $[* \stackrel{\text{claim}}{=} *]$, $[\text{checker}]$, $[\text{check}(*, *)]$, $[\text{check}_2(*, *, *)]$, $[\text{check}_3(*, *, *)]$,
check $^*(*, *)$, $[\text{check}_2^*(*, *, *)]$, $[[*]^{\cdot}]$, $[[*]^-]$, $[[*]^\circ]$, $[\text{msg}]$, $[* \stackrel{\text{msg}}{=} *]$, $[<\text{stmt}>]$,
 $[\text{stmt}]$, $[* \stackrel{\text{stmt}}{=} *]$, $[\text{HeadNil}']$, $[\text{HeadPair}']$, $[\text{Transitivity}']$, $[\perp]$, $[\text{Contra}']$, $[\text{T}_E]$,
 $[\text{L}_1]$, $[\ast]$, $[\mathcal{A}]$, $[\mathcal{B}]$, $[\mathcal{C}]$, $[\mathcal{D}]$, $[\mathcal{E}]$, $[\mathcal{F}]$, $[\mathcal{G}]$, $[\mathcal{H}]$, $[\mathcal{I}]$, $[\mathcal{J}]$, $[\mathcal{K}]$, $[\mathcal{L}]$, $[\mathcal{M}]$, $[\mathcal{N}]$, $[\mathcal{O}]$, $[\mathcal{P}]$, $[\mathcal{Q}]$,
 $[\mathcal{R}]$, $[\mathcal{S}]$, $[\mathcal{T}]$, $[\mathcal{U}]$, $[\mathcal{V}]$, $[\mathcal{W}]$, $[\mathcal{X}]$, $[\mathcal{Y}]$, $[\mathcal{Z}]$, $[(* | * := *)]$, $[(* | * := *)]$, \emptyset , $[\text{Remainder}]$,
 $[(*)^{\text{v}}]$, $[\text{intro}(*, *, *, *)]$, $[\text{intro}(*, *, *, *)]$, $[\text{error}(*, *)]$, $[\text{error}_2(*, *)]$, $[\text{proof}(*, *, *)]$,
 $[\text{proof}_2(*, *)]$, $[\mathcal{S}(*, *)]$, $[\mathcal{S}^{\text{I}}(*, *)]$, $[\mathcal{S}^{\triangleright}(*, *, *)]$, $[\mathcal{S}^{\text{E}}(*, *)]$, $[\mathcal{S}_1^{\text{E}}(*, *, *)]$,
 $[\mathcal{S}^+(*, *)]$, $[\mathcal{S}_1^+(*, *, *)]$, $[\mathcal{S}^-(*, *)]$, $[\mathcal{S}_1^-(*, *, *)]$, $[\mathcal{S}^*(*, *)]$, $[\mathcal{S}_1^*(*, *, *)]$,
 $[\mathcal{S}_2^*(*, *, *, *)]$, $[\mathcal{S}^{\text{O}}(*, *)]$, $[\mathcal{S}_1^{\text{O}}(*, *)]$, $[\mathcal{S}^{\leftarrow}(*, *)]$, $[\mathcal{S}_1^{\leftarrow}(*, *, *, *)]$, $[\mathcal{S}^{\#}(*, *)]$,
 $[\mathcal{S}_1^{\#}(*, *, *, *)]$, $[\mathcal{S}^{\text{i.e.}}(*, *)]$, $[\mathcal{S}_1^{\text{i.e.}}(*, *, *, *)]$, $[\mathcal{S}_2^{\text{i.e.}}(*, *, *, *, *)]$, $[\mathcal{S}^{\vee}(*, *)]$,
 $[\mathcal{S}_1^{\vee}(*, *, *, *)]$, $[\mathcal{S}^{\text{:}}(*, *)]$, $[\mathcal{S}_1^{\text{:}}(*, *, *)]$, $[\mathcal{S}_2^{\text{:}}(*, *, *, *)]$, $[\mathcal{T}(*)]$, $[\text{claims}(*, *, *)]$,
 $[\text{claims}_2(*, *, *)]$, $[<\text{proof}>]$, $[\text{proof}]$, $[[\text{Lemma } * : *]]$, $[[\text{Proof of } * : *]]$,
 $[* \text{ lemma } * : *]$, $[* \text{ antilemma } * : *]$, $[* \text{ rule } * : *]$, $[* \text{ antirule } * : *]$,
 $[\text{verifier}]$, $[\mathcal{V}_1(*)]$, $[\mathcal{V}_2(*, *)]$, $[\mathcal{V}_3(*, *, *, *)]$, $[\mathcal{V}_4(*, *)]$, $[\mathcal{V}_5(*, *, *, *)]$, $[\mathcal{V}_6(*, *, *, *)]$,
 $[\mathcal{V}_7(*, *, *, *)]$, $[\text{Cut}(*, *)]$, $[\text{Head}_{\oplus}(*)]$, $[\text{Tail}_{\oplus}(*)]$, $[\text{rule}_1(*, *)]$, $[\text{rule}(*, *)]$,
 $[\text{Rule tactic}]$, $[\text{Plus}(*, *)]$, $[[\text{Theory } *]]$, $[\text{theory}_2(*, *)]$, $[\text{theory}_3(*, *)]$,
 $[\text{theory}_4(*, *, *)]$, $[\text{HeadNil}']$, $[\text{HeadPair}']$, $[\text{Transitivity}']$, $[\text{Contra}']$, $[\text{HeadNil}]$,
 $[\text{HeadPair}]$, $[\text{Transitivity}]$, $[\text{Contra}]$, $[\text{T}_E]$, $[\text{ragged right}]$,
 $[\text{ragged right expansion}]$, $[\text{parm}(*, *, *)]$, $[\text{parm}^*(*, *, *)]$, $[\text{inst}(*, *)]$,
 $[\text{inst}^*(*, *)]$, $[\text{occur}(*, *, *)]$, $[\text{occur}^*(*, *, *)]$, $[\text{unify}(*=*, *)]$, $[\text{unify}^*(*=*, *)]$,
 $[\text{unify}_2(=*, *)]$, $[\text{L}_a]$, $[\text{L}_b]$, $[\text{L}_c]$, $[\text{L}_d]$, $[\text{L}_e]$, $[\text{L}_f]$, $[\text{L}_g]$, $[\text{L}_h]$, $[\text{L}_i]$, $[\text{L}_j]$, $[\text{L}_k]$, $[\text{L}_l]$, $[\text{L}_m]$,
 $[\text{L}_n]$, $[\text{L}_o]$, $[\text{L}_p]$, $[\text{L}_q]$, $[\text{L}_r]$, $[\text{L}_s]$, $[\text{L}_t]$, $[\text{L}_u]$, $[\text{L}_v]$, $[\text{L}_w]$, $[\text{L}_x]$, $[\text{L}_y]$, $[\text{L}_z]$, $[\text{L}_A]$, $[\text{L}_B]$, $[\text{L}_C]$,
 $[\text{L}_D]$, $[\text{L}_E]$, $[\text{L}_F]$, $[\text{L}_G]$, $[\text{L}_H]$, $[\text{L}_I]$, $[\text{L}_J]$, $[\text{L}_K]$, $[\text{L}_L]$, $[\text{L}_M]$, $[\text{L}_N]$, $[\text{L}_O]$, $[\text{L}_P]$, $[\text{L}_Q]$, $[\text{L}_R]$,
 $[\text{L}_S]$, $[\text{L}_T]$, $[\text{L}_U]$, $[\text{L}_V]$, $[\text{L}_W]$, $[\text{L}_X]$, $[\text{L}_Y]$, $[\text{L}_Z]$, $[\text{Reflexivity}]$, $[\text{Reflexivity}_1]$,
 $[\text{Commutativity}]$, $[\text{Commutativity}_1]$, $[<\text{tactic}>]$, $[\text{tactic}]$, $[* \stackrel{\text{tactic}}{=} *]$, $[\mathcal{P}(*, *, *)]$,
 $[\mathcal{P}^*(*, *, *)]$, p_0 , $[\text{conclude}_1(*, *)]$, $[\text{conclude}_2(*, *, *)]$, $[\text{conclude}_3(*, *, *, *)]$,
 $[\text{conclude}_4(*, *)]$, $[\text{check}]$, $[* \stackrel{\text{check}}{=} *]$, $[\text{RootVisible}(*)]$, $[\text{A}]$, $[\text{R}]$, $[\text{C}]$, $[\text{T}]$, $[\text{L}]$, $[*]$, $[*]$,
 $[a]$, $[b]$, $[c]$, $[d]$, $[e]$, $[f]$, $[g]$, $[h]$, $[i]$, $[j]$, $[k]$, $[l]$, $[m]$, $[n]$, $[o]$, $[p]$, $[q]$, $[r]$, $[s]$, $[t]$, $[u]$, $[v]$,
 $[w]$, $[x]$, $[y]$, $[z]$, $[(* \equiv * | * := *)]$, $[(* \equiv^0 * | * := *)]$, $[(* \equiv^1 * | * := *)]$, $[(* \equiv^* * | * := *)]$,
 $[\text{Ded}(*, *)]$, $[\text{Ded}_0(*, *)]$, $[\text{Ded}_1(*, *, *)]$, $[\text{Ded}_2(*, *, *)]$, $[\text{Ded}_3(*, *, *, *)]$,
 $[\text{Ded}_4(*, *, *, *)]$, $[\text{Ded}_4^*(*, *, *, *)]$, $[\text{Ded}_5(*, *, *)]$, $[\text{Ded}_6(*, *, *, *)]$,
 $[\text{Ded}_6^*(*, *, *, *)]$, $[\text{Ded}_7(*)]$, $[\text{Ded}_8(*, *)]$, $[\text{Ded}_8^*(*, *)]$, S , $[\text{Neg}]$, $[\text{MP}]$, $[\text{Gen}]$,
 $[\text{Ded}]$, $[\text{S1}]$, $[\text{S2}]$, $[\text{S3}]$, $[\text{S4}]$, $[\text{S5}]$, $[\text{S6}]$, $[\text{S7}]$, $[\text{S8}]$, $[\text{S9}]$, $[\text{Repetition}]$, $[\text{A1}']$, $[\text{A2}']$, $[\text{A4}']$,
 $[\text{A5}']$, $[\text{Prop 3.2a}]$, $[\text{Prop 3.2b}]$, $[\text{Prop 3.2c}]$, $[\text{Prop 3.2d}]$, $[\text{Prop 3.2e}_1]$, $[\text{Prop 3.2e}_2]$,
 $[\text{Prop 3.2e}]$, $[\text{Prop 3.2f}_1]$, $[\text{Prop 3.2f}_2]$, $[\text{Prop 3.2f}]$, $[\text{Prop 3.2g}_1]$, $[\text{Prop 3.2g}_2]$,
 $[\text{Prop 3.2g}]$, $[\text{Prop 3.2h}_1]$, $[\text{Prop 3.2h}_2]$, $[\text{Prop 3.2h}]$, $[\text{Block}_1(*, *, *)]$, $[\text{Block}_2(*)]$,
 $[\text{kvanti}]$, $[\text{UniqueMember}]$, $[\text{UniqueMember(Type)}]$, $[\text{SameSeries}]$, $A4$,
 $[\text{SameMember}]$, $[\text{Qclosed(Addition)}]$, $[\text{Qclosed(Multiplication)}]$,
 $[\text{FromCartProd}(1)]$, $[\text{1rule fromCartProd}(2)]$, $[\text{constantRationalSeries}(*)]$,

[cartProd(*)], [Power(*)], [binaryUnion(*, *)], [SetOfRationalSeries],
 [IsSubset(*, *)], [(p*, *)], [(s*)], [(· · ·)], [Objekt-var], [Ex-var], [Ph-var], [Værdi],
 [Variabel], [Op(*)], [Op(*, *)], [* == *], [ContainsEmpty(*)], [Nat(*)],
 [Dedu(*, *)], [Dedu₀(*, *)], [Dedu_s(*, *, *)], [Dedu₁(*, *, *)], [Dedu₂(*, *, *)],
 [Dedu₃(*, *, *, *)], [Dedu₄(*, *, *, *)], [Dedu₄<sup>*(*, *, *, *)], [Dedu₅(*, *, *)],
 [Dedu₆(*, *, *, *)], [Dedu₆<sup>*(*, *, *, *)], [Dedu₇(*)], [Dedu₈(*, *)], [Dedu₈<sup>*(*, *)],
 [Ex₁], [Ex₂], [Ex₃], [Ex₁₀], [Ex₂₀], [*_{Ex}], [*^{Ex}], [(*) == * | * == *]_{Ex},
 [(<* == * | * == *)_{Ex}], [(<* == * | * == *)_{Ex}], [(<* == * | * == *)_{Ex}], [ph₁], [ph₂], [ph₃],
 [*_{Ph}], [*^{Ph}], [(*) == * | * == *]_{Ph}, [(*) == * | * == *]_{Ph}, [(*) == * | * == *]_{Ph},
 [(<* == * | * == *)_{Ph}], [(<* == * | * == *)_{Me}], [(<* == * | * == *)_{Me}],
 [(<* == * | * == *)_{Me}], [bs], [OBS], [\mathcal{BS}], [\emptyset], [SystemQ], [MP], [Gen], [Repetition],
 [Neg], [Ded], [ExistIntro], [Extensionality], [\emptyset Def], [PairDef], [UnionDef],
 [PowerDef], [SeparationDef], [AddDoubleNeg], [RemoveDoubleNeg],
 [AndCommutativity], [AutoImply], [Contrapositive], [FirstConjunct],
 [SecondConjunct], [FromContradiction], [FromDisjuncts], [IffCommutativity],
 [IffFirst], [IffSecond], [ImpliesTransitivity], [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], [\emptyset isSubset], [HelperMemberNot \emptyset],
 [MemberNot \emptyset], [HelperUnique \emptyset], [Unique \emptyset], [= Reflexivity], [= Symmetry],
 [Helper == Transitivity], [= Transitivity], [HelperTransferNotEq],
 [TransferNotEq], [HelperPairSubset], [Helper(2)PairSubset], [PairSubset],
 [SamePair], [SameSingleton], [UnionSubset], [SameUnion], [SeparationSubset],
 [SameSeparation], [SameBinaryUnion], [IntersectionSubset], [SameIntersection],
 [AutoMember], [HelperEqSysNot \emptyset], [EqSysNot \emptyset], [HelperEqSubset],
 [EqSubset], [HelperEqNecessary], [EqNecessary], [HelperNoneEqNecessary],
 [Helper(2)NoneEqNecessary], [NoneEqNecessary], [EqClassIsSubset],
 [EqClassesAreDisjoint], [AllDisjoint], [AllDisjointImplies], [BSsubset],
 [Union(BS/R)subset], [UnionIdentity], [EqSysIsPartition], [(x1)], [(x2)], [(y1)],
 [(y2)], [(v1)], [(v2)], [(v3)], [(v4)], [(v2n)], [(m1)], [(m2)], [(n1)], [(n2)], [(n3)], [(\epsilon)],
 [(\epsilon)1], [(\epsilon)2], [(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)], [X₁], [X₂],
 [Y₁], [Y₂], [V₁], [V₂], [V₃], [V₄], [V_{2n}], [M₁], [M₂], [N₁], [N₂], [N₃], [e], [e1], [e2],
 [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)], [ph₄], [ph₅], [ph₆], [NAT], [RATIONALSERIES], [SERIES],
 [SetOfReals], [SetOfFxs], [N], [Q], [X], [xs], [xaF], [ysF], [us], [usFoelge], [0], [1],</sup></sup></sup>

$\{(-1)\}, [2], [3], [1/2], [1/3], [2/3], [0f], [1f], [00], [01], [(- - 01)], [02], [01//02],$
 $[\text{lemma plus0Left}], [\text{lemma times1Left}], [\text{lemma eqAdditionLeft}],$
 $[\text{lemma eqMultiplicationLeft}], [\text{PlusAssociativity(R)}],$
 $[\text{PlusAssociativity(R)XX}], [\text{Plus0(R)}], [\text{Negative(R)}], [\text{Times1(R)}],$
 $[\text{lessAddition(R)}], [\text{PlusCommutativity(R)}], [\text{LeqAntisymmetry(R)}],$
 $[\text{LeqTransitivity(R)}], [\text{leqAddition(R)}], [\text{Distribution(R)}], [\text{A4(Axiom)}],$
 $[\text{InductionAxiom}], [\text{EqualityAxiom}], [\text{EqLeqAxiom}], [\text{EqAdditionAxiom}],$
 $[\text{EqMultiplicationAxiom}], [\text{QisClosed(Reciprocal)(Imply)}],$
 $[\text{QisClosed(Reciprocal)}], [\text{QisClosed(Negative)(Imply)}], [\text{QisClosed(Negative)}],$
 $[\text{leqReflexivity}], [\text{leqAntisymmetryAxiom}], [\text{leqTransitivityAxiom}], [\text{leqTotality}],$
 $[\text{leqAdditionAxiom}], [\text{leqMultiplicationAxiom}], [\text{plusAssociativity}],$
 $[\text{plusCommutativity}], [\text{Negative}], [\text{plus0}], [\text{timesAssociativity}],$
 $[\text{timesCommutativity}], [\text{ReciprocalAxiom}], [\text{times1}], [\text{Distribution}], [0\text{not}1],$
 $[\text{lemma eqLeq(R)}], [\text{TimesAssociativity(R)}], [\text{TimesCommutativity(R)}],$
 $[\text{lemma } =\text{f to sameF}], [\text{lemma plusF(Sym)}], [\text{lemma timesF(Sym)}],$
 $[\text{Separation2formula(1)}], [\text{Separation2formula(2)}], [\text{IfThenElse(T)}],$
 $[\text{IfThenElse(F)}], [\text{Cauchy}], [\text{PlusF}], [\text{ReciprocalF}], [\text{From } ==], [\text{To } ==],$
 $[\text{From } <<], [\text{to } <<], [\text{FromInR}], [\text{PlusR}], [\text{PlusR(Sym)}], [\text{TimesR}],$
 $[\text{TimesR(Sym)}], [\text{ReciprocalR(Axiom)}], [\text{LessMinus1(N)}], [\text{Nonnegative(N)}],$
 $[\text{US0}], [\text{NextXS(UpperBound)}], [\text{NextXS(NoUpperBound)}],$
 $[\text{NextUS(UpperBound)}], [\text{NextUS(NoUpperBound)}], [\text{ExpZero}], [\text{ExpPositive}],$
 $[\text{ExpZero(R)}], [\text{ExpPositive(R)}], [\text{BSzero}], [\text{BSpositive}], [\text{UStlescope(Zero)}],$
 $[\text{UStlescope(Positive)}], [\text{EqAddition(R)}], [\text{Unminus(R)}], [\text{FromLimit}],$
 $[\text{ToUpperBound}], [\text{FromUpperBound}], [\text{USisUpperBound}], [0\text{not}1(R)],$
 $[\text{ExpUnbounded(R)}], [\text{FromLeq(Advanced)(N)}], [\text{FromLeastUpperBound}],$
 $[\text{ToLeastUpperBound}], [\text{XSisNotUpperBound}], [\text{ysFGreater}], [\text{ysFLess}],$
 $[\text{SmallInverse}], [\text{NatType}], [\text{RationalType}], [\text{SeriesType}], [\text{Max}], [\text{Numerical}],$
 $[\text{MemberOfSeries(Imply)}], [\text{JoinConjuncts(2conditions)}],$
 $[\text{prop lemma imply negation}], [\text{TND}], [\text{FromNegatedImply}], [\text{ToNegatedImply}],$
 $[\text{FromNegated}(2 * \text{Imply})], [\text{FromNegatedAnd}], [\text{FromNegatedOr}],$
 $[\text{ToNegatedOr}], [\text{FromNegations}], [\text{From3Disjuncts}], [\text{From} 2 * 2\text{Disjuncts}],$
 $[\text{NegateDisjunct1}], [\text{NegateDisjunct2}], [\text{ExpandDisjuncts}], [\text{SENC1}], [\text{SENC2}],$
 $[\text{LessLiq(R)}], [\text{MemberOfSeries}], [\text{memberOfSeries(Type)}], [<< \text{testMacro(*)}],$
 $[\text{Tester1}], [\text{Tester2}], [\text{Tester3}], [\text{Tester4}], [\text{Tester5}], [\text{Tester6}];$

Preassociative

```
[*_-{*}], [*/indexintro(*, *, *, *)], [*/intro(*, *, *)], [*/bothintro(*, *, *, *, *)],
[*/nameintro(*, *, *, *)], [*'], [*[*]], [*[*→*]], [**[⇒*]], [*0], [*1], [*0b], [*-color(*)],
[*-color*(*)], [*H], [*T], [*U], [*h], [*t], [*s], [*c], [*d], [*a], [*M], [*B], [*r], [*i],
[*d], [*R], [*0], [*1], [*2], [*3], [*4], [*5], [*6], [*7], [*8], [*9], [*E], [*V], [*C], [*C*],
[_hide]:
```

Preassociative

```
[["*"],[],[(*)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

$$[\ast', \ast], [\ast', \ast];$$

Preassociative

[*(exp)*];

Preassociative

$[*'], [R(*)], [- R(*)], [rec*]$

Preassociative

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

Preassociative

$[\cup *], [* \cup *], [P(*)]$

Preassociative

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

Preassociative

$\left[\{*, *\}\right], \left[\langle *, *\rangle\right], \left[(-u*)\right], \left[-_f *\right], \left[(- - *)\right], \left[1f/*\right], \left[1fny/*\right], \left[01//temp*\right];$

Preassociative

[* ⊕ *]

Preassociative

$[*\cdot*], [*\cdot_0*], [(*\ast\ast)], [*\ast_f*], [\ast\ast\ast\ast];$

Preassociative

```
[* + *], [* + 0 *], [* + 1 *], [* - *], [* - 0 *], [* - 1 *], [(* + *)], [(* - *)], [* +f *],
[* -f *], [* + + *], [R(*) - -R(*)];
```

Preassociative

[[], [if(*, *, *)], [Max(*, *)], [Max(*, *)]]

Preassociative

$[* == *], [* \neq *], [* <= *], [* < *], [* <f *], [* \leq f *], [\text{SF}(*, *)], [* == *],$
 $[*!! == *], [* << *], [* < \leq == *], [* << \text{test}*];$

Preassociative

$[* \cup \{*\}], [* \cup *], [* \setminus \{*\}]$

Postassociative

$[*, \cdot, *], [*, \cdot, *], [*; ; *], [* + 2 *; *], [*; ; *], [* + 2 *; *]$

Postassociative

$[*, *]$:

Preassociative

1. Passassociative $[\ast \overset{\text{B}}{\approx} \ast], [\ast \overset{\text{D}}{\approx} \ast], [\ast \overset{\text{C}}{\approx} \ast], [\ast \overset{\text{P}}{\approx} \ast], [\ast \approx \ast], [\ast = \ast], [\ast \overset{+}{\rightarrow} \ast], [\ast \overset{\text{t}}{=} \ast], [\ast \overset{\text{t}^*}{=} \ast], [\ast \overset{\text{r}}{=} \ast], [\ast \in \ast], [\ast \subseteq \ast], [\ast \overset{\text{T}}{=} \ast], [\ast \overset{\text{s}}{=} \ast], [\ast \text{ free in } \ast], [\ast \text{ free in }^* \ast], [\ast \text{ free for } \ast \text{ in } \ast], [\ast \text{ free for }^* \ast \text{ in } \ast], [\ast \in_{\text{c}} \ast], [\ast < \ast], [\ast <^* \ast], [\ast \leq^* \ast], [\ast = \ast], [\ast \neq \ast], [\ast^{\text{var}}]$

$[*\#^0*], [*\#^1*], [*\#^* *], [*==*=], [* \subseteq *];$

Preassociative

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

Preassociative

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

Preassociative

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

Postassociative

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

Preassociative

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

Postassociative

$[* \Rightarrow*], [* \Rightarrow*], [* \Leftrightarrow*], [* \Leftrightarrow*];$

Preassociative

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

Postassociative

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

Preassociative

$[* \left\{ \begin{array}{c} * \\ * \end{array} \right\}];$

Preassociative

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

Preassociative

$[\ast\#\ast];$

Preassociative

$[*^I], [*^D], [*^V], [*^+], [*^-], [*^*];$

Preassociative

$[* @*], [* \triangleright*], [* \triangleright\triangleright*], [* \gg*], [* \trianglerighteq*];$

Postassociative

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

Preassociative

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

Postassociative

$[* \oplus*];$

Postassociative

$[*; *];$

Preassociative

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

Preassociative

$[* \text{ proof of } * : *], [\text{Line } * : * \gg*; *], [\text{Last line } * \gg* \square],$
 $[\text{Line } * : \text{Premise} \gg*; *], [\text{Line } * : \text{Side-condition} \gg*; *], [\text{Arbitrary} \gg*; *],$
 $[\text{Local} \gg* = *; *], [\text{Begin } *; * : \text{End}; *], [\text{Last block line } * \gg*; *],$
 $[\text{Arbitrary} \gg*; *];$

Postassociative

$[* | *];$

Postassociative

```
[*, *], [*[*]*];  
Preassociative  
[*&*];  
Preassociative  
[*\\*], [* linebreak[4] *], [*\\*]; End table
```

A Pyk definitioner

```
([<< testMacro(*)  $\xrightarrow{\text{pyk}}$  "<<testMacro( \" )"]  
[Tester1  $\xrightarrow{\text{pyk}}$  "tester1"]  
[Tester2  $\xrightarrow{\text{pyk}}$  "tester2"]  
[Tester3  $\xrightarrow{\text{pyk}}$  "tester3"]  
[Tester4  $\xrightarrow{\text{pyk}}$  "tester4"]  
[Tester5  $\xrightarrow{\text{pyk}}$  "tester5"]  
[Tester6  $\xrightarrow{\text{pyk}}$  "tester6"]  
[* << test*  $\xrightarrow{\text{pyk}}$  "\" <<test \""]  
[prove  $\xrightarrow{\text{pyk}}$  "prove"]  
)P
```

[$\text{prove} \stackrel{\text{tex}}{\equiv} \text{“prove”}$]

[$\text{Tester1} \stackrel{\text{tex}}{\equiv} \text{“Tester1”}$]

[$\text{Tester2} \stackrel{\text{tex}}{\equiv} \text{“Tester2”}$]

[$\text{Tester3} \stackrel{\text{tex}}{\equiv} \text{“Tester3”}$]

[$\text{Tester4} \stackrel{\text{tex}}{\equiv} \text{“Tester4”}$]

[$\text{Tester5} \stackrel{\text{tex}}{\equiv} \text{“Tester5”}$]

[$\text{Tester6} \stackrel{\text{tex}}{\equiv} \text{“Tester6”}$]