Ex3: Catena di records

envstack	cstack	Tempvalstack
_ = unbound	Expr1 **let("x",Eint 3, E)**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	Expr2 **let("x",Eint 3, E)** Expr1 **Eint 3**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	Expr2 **let("x",Eint 3, E)** Expr2 **Eint 3**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	Expr2 **let("x",Eint 3, E)**	Unbound Int(3)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
_ = unbound x = Int(3)	Expr1 **E**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
_ = unbound x = Int(3)	Expr2 **let("y", sum(Den "x,Eint 2), E2)** Expr1 **sum(Den "x,Eint 2)**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
_ = unbound x = Int(3)	Expr2 **let("y", sum(Den "x",Eint 2), E2)** Expr2 **sum(Den "x",Eint 2)** Expr1 **Den "x"** Expr1 **Eint 2**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
_ = unbound x = Int(3)	Expr2 **let("y", sum(Den "x",Eint 2), E2)** Expr2 **sum(Den "x",Eint 2)** Expr1 **Den "x"** Expr2 **Eint 2**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
_ = unbound x = Int(3)	Expr2 **let("y", sum(Den "x",Eint 2), E2)** Expr2 **sum(Den "x",Eint 2)** Expr1 **Den "x"**	Unbound Int(2)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
_ = unbound x = Int(3)	Expr2 **let("y", sum(Den "x",Eint 2), E2)** Expr2 **sum(Den "x",Eint 2)** Expr2 **Den "x"**	Unbound Int(2)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
_ = unbound x = Int(3)	Expr2 **let(“y”, sum(Den “x”,Eint 2), E2)** Expr2 **sum(Den “x”,Eint 2)**	Unbound Int(2) Int(3)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
_ = unbound x = Int(3)	Expr2 **let(“y”, sum(Den “x”,Eint 2), E2)**	Unbound Int(5)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
_ = unbound x = Int(3)	--	Unbound
_ = unbound x = Int(3) y = Int(5)	Expr1 **E2**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	Unbound
_ = unbound x = Int(3) y = Int(5)	Expr2 **let(“x”, sum(Den “x”,Den “y”), E3)** Expr1 **sum(Den “x”,Den “y”)**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
_ = unbound x = Int(3) y = Int(5)	Expr2 **let(“x”, sum(Den “x”,Den “y”), E3)** Expr2 **sum(Den “x”,Den “y”)** Expr1 **Den “x”** Expr1 **Den “y”**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
_ = unbound x = Int(3) y = Int(5)	Expr2 **let(“x”, sum(Den “x”,Den “y”), E3)** Expr2 **sum(Den “x”,Den “y”)** Expr1 **Den “x”** Expr2 **Den “y”**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
_ = unbound x = Int(3) y = Int(5)	Expr2 **let(“x”, sum(Den “x”,Den “y”), E3)** Expr2 **sum(Den “x”,Den “y”)** Expr1 **Den “x”**	Unbound Int(5)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
_ = unbound x = Int(3) y = Int(5)	Expr2 **let(“x”, sum(Den “x”,Den “y”), E3)** Expr2 **sum(Den “x”,Den “y”)** Expr2 **Den “x”**	Unbound Int(5)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
_ = unbound x = Int(3) y = Int(5)	Expr2 **let(“x”, sum(Den “x”,Den “y”), E3)** Expr2 **sum(Den “x”,Den “y”)**	Unbound Int(5) Int(3)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
_ = unbound x = Int(3) y = Int(5)	Expr2 **let(“x”, sum(Den “x”,Den “y”), E3)**	Unbound Int(8)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	Unbound Int(8)
_ = unbound x = Int(3) y = Int(5) x = Int(8)	Expr1 **let(“z”, fun([“y”],sum(Den”x”,Den”y”) E4)**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
_ = unbound x = Int(3) y = Int(5) x = Int(8)	Expr2 **let(“z”, fun([“y”],sum(Den”x”,Den”y”) E4)** Expr1 **fun([“y”],sum(Den”x”,Den”y”)**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
_ = unbound x = Int(3) y = Int(5) x = Int(8)	Expr2 **let(“z”, fun([“y”],sum(Den”x”,Den”y”)** **E4)** Expr2 **fun([“y”],sum(Den”x”,Den”y”)**	Unbound

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
_ = unbound x = Int(3) y = Int(5) x = Int(8)	Expr2 **let(“z”,** **fun([“y”],sum(Den”x”,Den”y”),E4)**	Unbound Mkfun(**fun([“y”],sum(Den”x”,Den”y”)** **, *rho*)**

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) z= Mkfun(fun([“y”],sum(Den”x”,Den”y”) , ***rho***)	Expr1 **sum(Den“y”,appl(Den”z”, [Den”x”])**	Unbound

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) z= Mkfun(fun([“y”],sum(Den”x”,Den”y”), ***rho***)	Expr2 **sum(Den“y”,appl(Den”z”, [Den”x”])** Expr1 **Den“y”** Expr1**appl(Den”z”, [Den”x”])**	Unbound

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) z= Mkfun(fun([“y”],sum(Den”x”,Den”y”), *rho*)	Expr2 sum(Den“y”,appl(Den”z”, [Den”x”]) Expr1 Den“y” Expr2appl(Den”z”, [Den”x”]) Expr1 Den“z” Expr1 Den“x”	Unbound

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) z= Mkfun(fun([“y”],sum(Den”x”,Den”y”), *rho*)	Expr2 sum(Den“y”,appl(Den”z”, [Den”x”]) Expr1 Den“y” Expr2appl(Den”z”, [Den”x”]) Expr1 Den“z” Expr2 Den“x”	Unbound

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) z= Mkfun(fun([“y”],sum(Den”x”,Den”y”), ***rho***)	Expr2 **sum(Den“y”,appl(Den”z”, [Den”x”])** Expr1 **Den“y”** Expr2**appl(Den”z”, [Den”x”])** Expr2 **Den“z”**	Unbound Int(8)

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) z= Mkfun(fun([“y”],sum(Den”x”,Den”y”), ***rho***)	Expr2 **sum(Den“y”,appl(Den”z”, [Den”x”])** Expr1 **Den“y”** Expr2**appl(Den”z”, [Den”x”])**	Unbound Int(8) Mkfun(fun([“y”],sum (Den”x”,Den”y”), ***rho***)

rho

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
…	…	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) y = Int(8)	Expr1 **sum(Den"x",Den"y")**	Unbound

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
…	…	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) y = Int(8)	Expr2 **sum(Den"x",Den"y")** Expr1 **Den"x"** Expr1 **Den"y"**	Unbound

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
…	…	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) y = Int(8)	Expr2 **sum(Den"x",Den"y")** Expr1 **Den"x"** Expr2 **Den"y"**	Unbound

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
…	…	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) y = Int(8)	Expr1 **sum(Den"x",Den"y")** Expr1 **Den"x"**	Unbound Int(8)

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
…	…	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) y = Int(8)	Expr2 **sum(Den"x",Den"y")** Expr2 **Den"x"**	Unbound Int(8)

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
…	…	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) y = Int(8)	Expr2 **sum(Den"x",Den"y")**	Unbound Int(8) Int(8)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) z= Mkfun(fun([“y”],sum(Den”x”,Den”y”), ***rho***)	Expr2 **sum(Den“y”,appl(Den”z”, [Den”x”])** Expr1 **Den“y”**	Unbound Int(16)

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) z= Mkfun(fun([“y”],sum(Den”x”,Den”y”), ***rho***)	Expr2 **sum(Den“y”,appl(Den”z”, [Den”x”])** Expr2 **Den“y”**	Unbound Int(16)

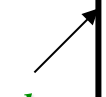
rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) z= Mkfun(fun([“y”],sum(Den”x”,Den”y”), ***rho***)	Expr2 **sum(Den“y”,appl(Den”z”, [Den”x”])**	Unbound Int(16) Int(5)

rho

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
…	--	Unbound
_ = unbound x = Int(3) y = Int(5) x = Int(8) z= Mkfun(fun([“y”],sum(Den”x”,Den”y”), ***rho***)	--	Unbound Int(21)

rho



envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
…	--	…
_ = unbound x = Int(3) y = Int(5) x = Int(8)	--	Unbound Int(21)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
…	--	…
_ = unbound x = Int(3) y = Int(5)	--	Unbound Int(21)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound
_ = unbound x = Int(3)	--	Unbound Int(21)

envstack	cstack	Tempvalstack
_ = unbound	--	Unbound Int(21)