Continuation-Passing Style

Syntax

x	identifiers		
$e,\ K$	$::=$		terms
	$\mid$	t	
	$\mid$	s	
t	$::=$		trivial terms, *i.e.* values
	$\mid$	x	
	$\mid$	$\lambda x.e$ bind x in e	
s	$::=$		serious terms, *i.e.* computations
	$\mid$	$e_0\ e_1$	

Transformation

$$
\begin{array}{lcl}
[\![x]\!]K & = & K\ x \\
[\![\lambda x.\ e]\!]K & = & K\ (\lambda x\ k.\ [\![e]\!]\ k) \\
[\![t_0\ t_1]\!]K & = & [\![t_0]\!]\ [\![t_1]\!]\ K \\
[\![t_0\ s_1]\!]K & = & [\![s_1]\!]\ (\lambda x_1.\ [\![t_0]\!]\ x_1\ K) \\
[\![s_0\ t_1]\!]K & = & [\![s_0]\!]\ (\lambda x_0.\ x_0\ [\![t_1]\!]\ K) \\
[\![s_0\ s_1]\!]K & = & [\![s_0]\!]\ (\lambda x_0.\ [\![s_1]\!]\ (\lambda x_1.\ x_0\ x_1\ K))
\end{array}
$$