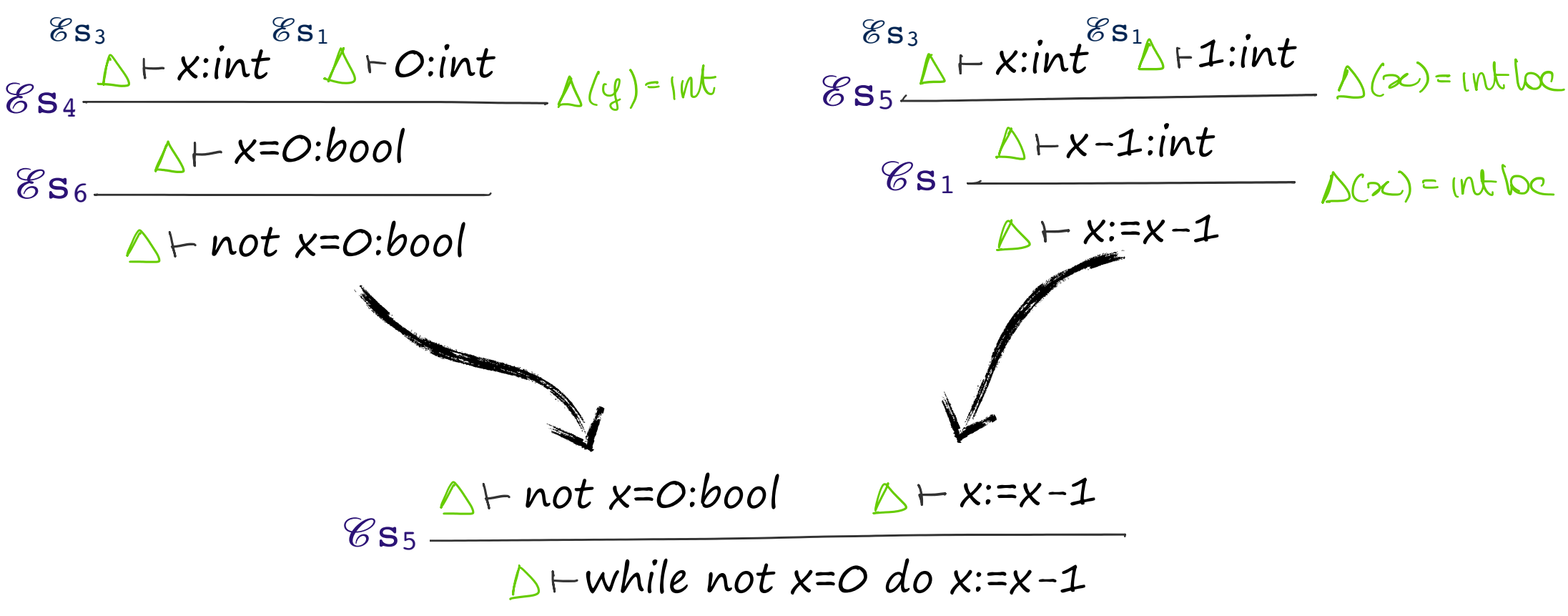
$\mathcal{CS}_3$ $\mathcal{CS}_1$
$\Delta \vdash x:int$ $\Delta \vdash 0:int$
$\mathcal{CS}_4$ $\Delta(y) = int$
$\Delta \vdash x=0:bool$
$\mathcal{CS}_6$
$\Delta \vdash not\ x=0:bool$
$\mathcal{CS}_3$ $\mathcal{CS}_1$
$\Delta \vdash x:int$ $\Delta \vdash 1:int$
$\mathcal{CS}_5$ $\Delta(x) = int\ loc$
$\Delta \vdash x-1:int$
$\mathcal{CS}_1$ $\Delta(x) = int\ loc$
$\Delta \vdash x:=x-1$
$\Delta \vdash not\ x=0:bool$ $\Delta \vdash x:=x-1$
$\mathcal{CS}_5$
$\Delta \vdash while\ not\ x=0\ do\ x:=x-1$