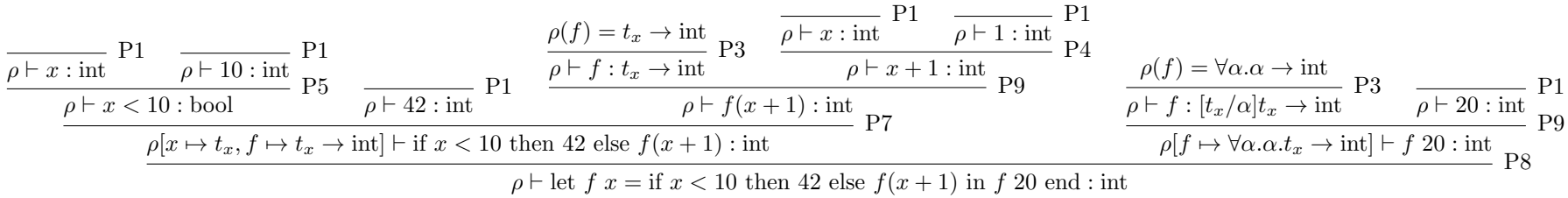
$\rho \vdash x : \text{int}$ P1
$\rho \vdash 10 : \text{int}$ P1
$\rho \vdash x < 10 : \text{bool}$ P5
$\rho \vdash 42 : \text{int}$ P1
$\rho(f) = t_x \to \text{int}$
$\rho \vdash f : t_x \to \text{int}$ P3
$\rho \vdash x : \text{int}$ P1
$\rho \vdash 1 : \text{int}$ P1
$\rho \vdash x + 1 : \text{int}$ P4
$\rho \vdash f(x+1) : \text{int}$ P9
$\rho[x \mapsto t_x, f \mapsto t_x \to \text{int}] \vdash \text{if } x < 10 \text{ then } 42 \text{ else } f(x+1) : \text{int}$ P7
$\rho(f) = \forall\alpha.\alpha \to \text{int}$
$\rho \vdash f : [t_x/\alpha]t_x \to \text{int}$ P3
$\rho \vdash 20 : \text{int}$ P1
$\rho[f \mapsto \forall\alpha.\alpha.t_x \to \text{int}] \vdash f\ 20 : \text{int}$ P9
$\rho \vdash \text{let } f\ x = \text{if } x < 10 \text{ then } 42 \text{ else } f(x+1) \text{ in } f\ 20 \text{ end} : \text{int}$ P8