1. EJERCICIO 5

proc costoSubsidioMejora (in th: eph_h, in $ti : eph_i$, in $monto : \mathbb{Z}$, out $res : \mathbb{Z}$){
Pre $\{validarEncuesta(th, ti) \land monto \geq 0\}$
Post $\{res = monto * \sum_{j=0}^{|th|-1}(\text{if } filtroSubsidio(ti, th[j]) \text{ then } 1 \text{ else } 0 \text{ fi})\}$
}

pred filtroSubsidio (ti: eph_i, $thr : hogar$){
$(thr[@ii7] = 1) \land (thr[@iv1] = 1) \land$
$individuosEnHogar(ti, thr[@hogcodusu]) - 2 > thr[@ii2]$
}

2. EJERCICIO 4

pred filtroTeleworking (thr: hogar) {
$thr[@mas\_500] = 1 \land$
$(thr[@iv1] = 1 \lor thr[@iv1] = 2)$
}

aux indiceCasaDePersona (th: eph_h, $indcodusu : \mathbb{Z}$) : $\mathbb{Z}$ =
$\sum_{j=0}^{|th|-1}$ if $th[j][@hogcodusu] = indcodusu$ then j else 0 fi ;

pred hacenTeleworking (th: eph_h, $p : individuo$){
$filtroTeleworking(th[indiceCasaDePersona(th, p[@indcodusu])]) \land th[j][@ii3] = 1 \land p[@ppo4g] = 6$
}

pred cumpleFiltroTeleworking (th: eph_h, $p : individuo$){
$filtroTeleworking(th[indiceCasaDePersona(th, p[@indcodusu])])$
}

aux percentTeleworking (th: eph_h, $ti : eph_i$) : $\mathbb{R}$ =
$(\sum_{j=0}^{|ti|-1}(\text{if } hacenTeleworking(th, ti[j]) \text{ then } 1 \text{ else } 0 \text{ fi}))/$
$(\sum_{j=0}^{|ti|-1}(\text{if } cumpleFiltroTeleworking(th, ti[j] \text{ then } 1 \text{ else } 0 \text{ fi}) ;$

proc creceElTeleworkingEnCiudadesGrandes (in t1h: eph_h, in $t1i : eph_i, \in t2h : eph_h, \in t2i : eph_i$, out $res : Bool$){
Pre {
$validarEncuesta(t1h, tli) \land validarEncuesta(t2h, t2i) \land_L$
$t1h[0][@hogaño] < t2h[0][@hogaño] \land$
$t1h[0][@hogtrimestre] = t2h[0][@hogtrimestre]$
}
Post $\{res = percentTeleworking(t1h, t1i) < percentTeleworking(t2h, t2i)\}$
}