



$I \equiv \text{true } c=1$

$\mathcal{G} \equiv (c=1 \wedge y' = x \wedge x=2 \wedge c=2)$

\downarrow
 $(c=1 \wedge \text{false} \wedge x \neq 2 \wedge c=2)$

\downarrow
 $(c=2 \wedge y' = y - 1 \wedge c=2)$

\downarrow
 $(c=2 \wedge y > 0 \wedge c=3)$

\downarrow
 $(c=2 \wedge y \leq 0 \wedge c=4)$

$$\mathcal{F}(I) \equiv (c_0 = 1 \wedge y_1 = x_0 \wedge x_0 = 2 \wedge c_1 = 2)$$

$$\begin{aligned} & \vee \\ & (c_0 = 1 \wedge x_0 \neq 2 \wedge c_1 = 2) \\ & \equiv c_0 = 1 \wedge c_1 = 2 \wedge [(y_1 = x_0 \wedge x_0 = 2) \vee (x_0 \neq 2)] \end{aligned}$$

$$\begin{aligned} \mathcal{F}(\mathcal{F}(I)) & \equiv c_0 = 1 \wedge c_1 = 2 \wedge [(y_1 = x_0 \wedge x_0 = 2) \vee (x_0 \neq 2)] \\ & \wedge [(c_1 = 2 \wedge y_2 = y_1 \neq 1 \wedge c_2 = 2) \\ & \quad \vee \\ & \quad (c_1 = 2 \wedge y_1 > 0 \wedge c_2 = 3) \\ & \quad \vee \\ & \quad (c_1 = 2 \wedge y_1 \leq 0 \wedge c_2 = 4)] \end{aligned}$$

$$\begin{aligned} \mathcal{F}^3(I) & \equiv c_0 = 1 \wedge c_1 = 2 \wedge [(y_1 = x_0 \wedge x_0 = 2) \vee (x_0 \neq 2)] \\ & \wedge [(y_2 = y_1 \neq 1 \wedge c_2 = 2) \vee (y_1 > 0 \wedge c_2 = 3) \vee (y_1 \leq 0 \wedge c_2 = 4)] \\ & \wedge [c_2 = 2 \wedge [(y_3 = y_2 \neq 1 \wedge c_3 = 2) \vee (y_2 > 0 \wedge c_3 = 3) \\ & \quad \vee (y_2 \leq 0 \wedge c_3 = 4)]] \end{aligned}$$

$$\begin{aligned} \mathcal{F}^4(I) & \equiv c_0 = 1 \wedge c_1 = 2 \wedge [(y_1 = x_0 \wedge x_0 = 2) \vee (x_0 \neq 2)] \\ & \wedge [(y_2 = y_1 \neq 1 \wedge c_2 = 2) \wedge (y_3 = y_2 \neq 1 \wedge c_3 = 2)] \\ & \wedge [(y_4 = y_3 \neq 1 \wedge c_4 = 2) \vee (y_3 > 0 \wedge c_4 = 3) \vee (y_3 \leq 0 \wedge c_4 = 4)] \end{aligned}$$