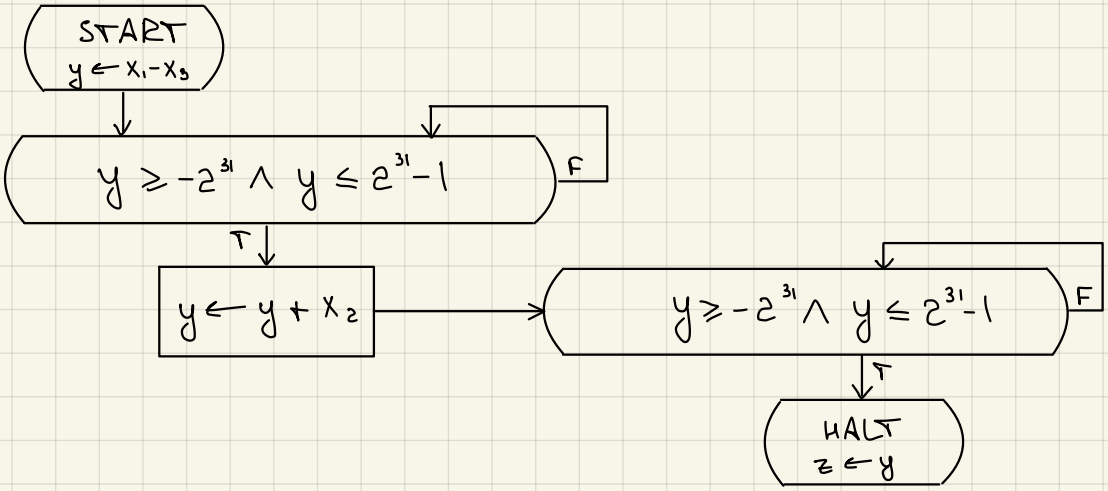
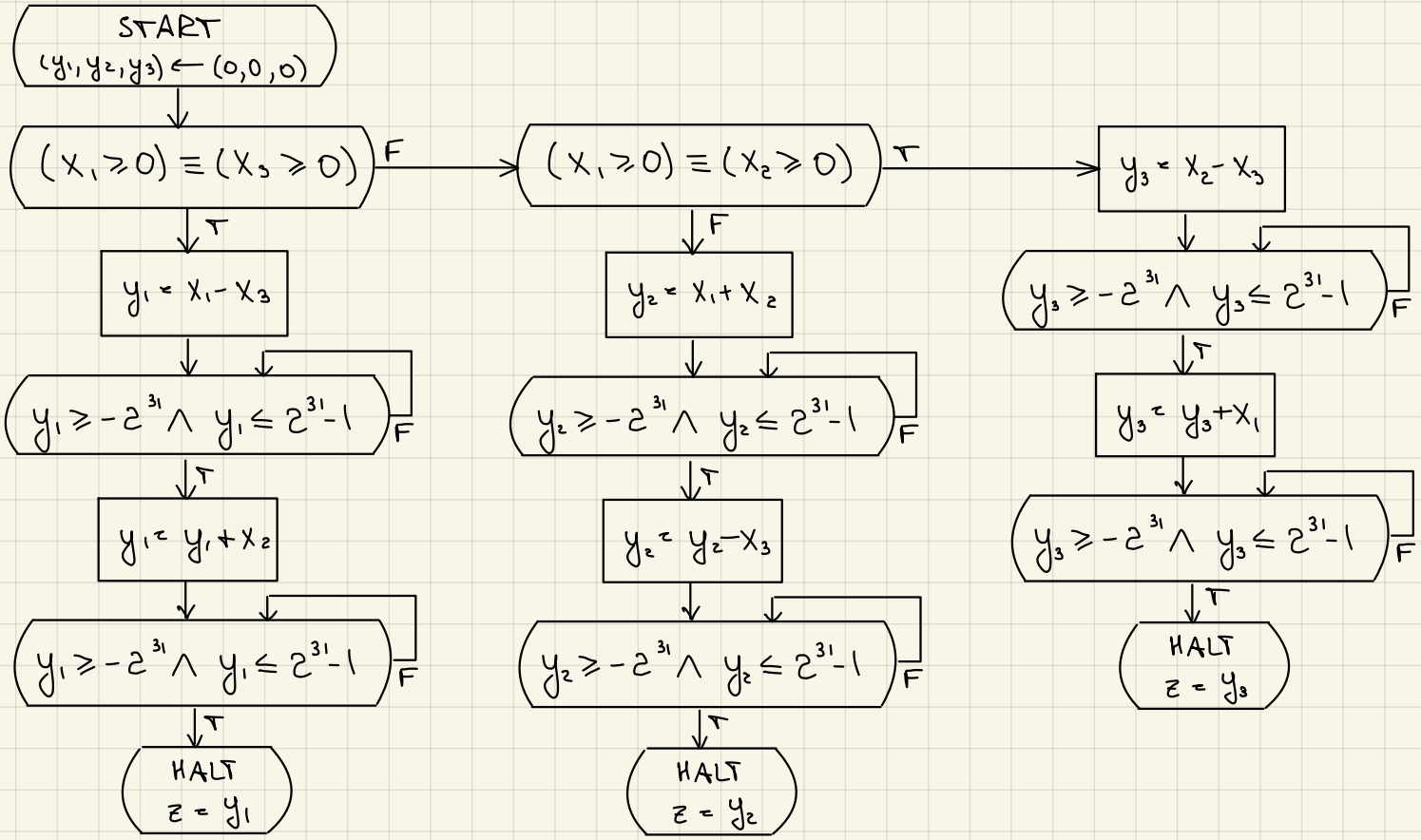
P1: $D_{\bar{x}} = D_{\bar{y}} = D_{\bar{z}} = \mathbb{Z}$



P2: $D_{\bar{x}} = D_{\bar{y}} = D_{\bar{z}} = \mathbb{Z}$



T1: $\varphi_1(\bar{x}) \equiv -2^{31} \leq x_1 \leq 2^{31}-1 \wedge -2^{31} \leq x_2 \leq 2^{31}-1 \wedge -2^{31} \leq x_3 \leq 2^{31}-1 \wedge$
$\wedge -2^{31} \leq x_1 - x_3 \leq 2^{31}-1 \wedge -2^{31} \leq x_1 + x_2 - x_3 \leq 2^{31}-1$

$\psi_1(\bar{x}, \bar{z}) \equiv z = x_1 - x_3 + x_2$

T2: $\varphi_2(\bar{x}) \equiv -2^{31} \leq x_1 \leq 2^{31}-1 \wedge -2^{31} \leq x_2 \leq 2^{31}-1 \wedge -2^{31} \leq x_3 \leq 2^{31}-1 \wedge$
$\wedge -2^{31} \leq x_1 + x_2 - x_3 \leq 2^{31}-1$

$\psi_2(\bar{x}, \bar{z}) \equiv z = x_1 - x_3 + x_2$