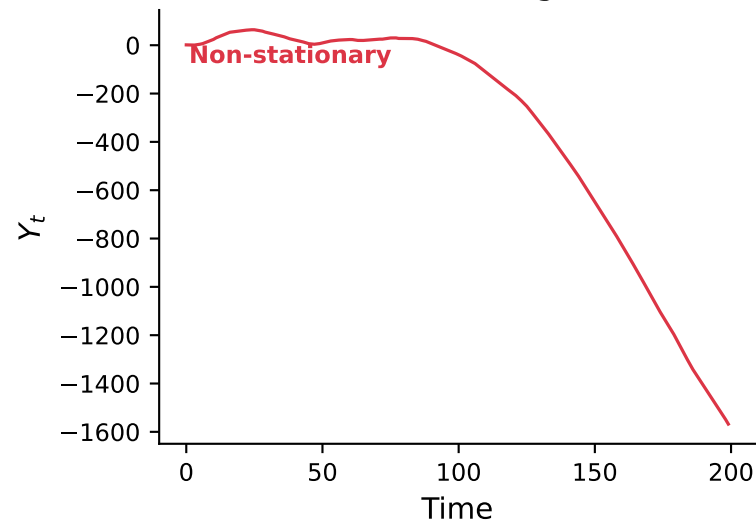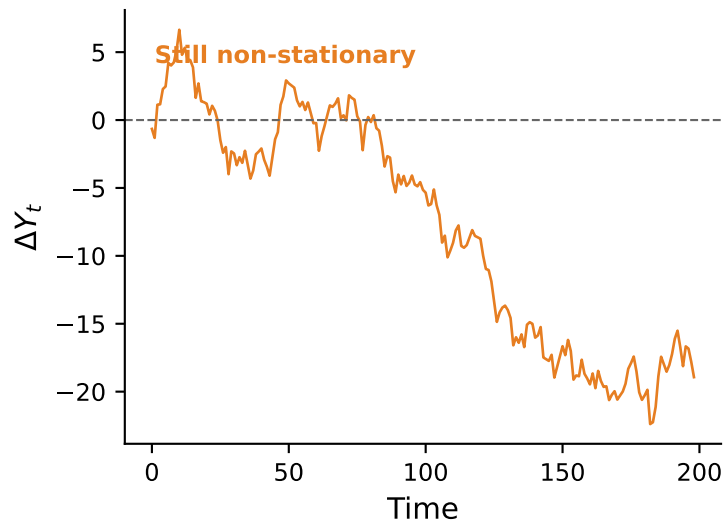Correct answer: (C) Two differences needed

$Y_t \sim I(2)$ — Original

$\Delta Y_t \sim I(1)$ — One difference

$\Delta^2 Y_t \sim I(0)$ — Two differences

Non-stationary

Still non-stationary

Stationary!