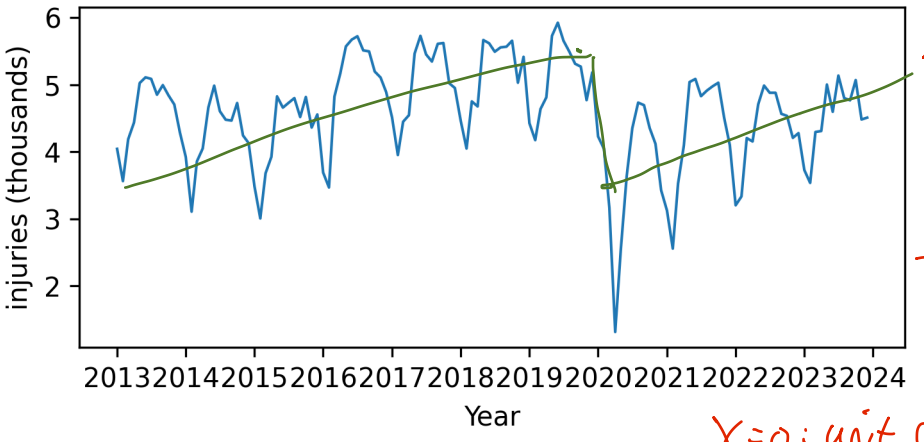

ADF:

$\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \delta_1 \Delta y_{t-1} + \dots + \delta_p \Delta y_{t-p} + \varepsilon_t$

test statistic: $\frac{\hat{\gamma}}{SE(\hat{\gamma})}$

$\gamma = 0$: unit root, $\gamma < 0$: stationary.

Above are monthly injuries from motor vehicle collisions in New York City. An augmented Dickey-Fuller test, `adfuller(injuries)`, gives a p-value of 0.01. Which is the best way to proceed:

A: The time plot indicates a non-constant mean function describing a major dip due to the COVID-19 pandemic and an increasing trend at other times. The ADF test does not support or refute that model.

B: The ADF test suggests the series is stationary, supporting a decision to fit a SARMA model.

C: The ADF test suggests the series is non-stationary; it should be differenced before fitting a SARMA.

D: The ADF test indicates that the series is non-stationary, supporting the use of a non-constant mean function to describe a major dip due to the COVID-19 pandemic and an increasing trend at other times.

Conventional interpretation of the test.