1. Suppose that y_t is autocorrelated but stationary, so it has $E(y_t) = \mu$ at every t. Explain **intuitively** why $y_t > \mu \Rightarrow E(y_{t+1} \mid y_t) < y_t$.

2. Argue that $E(y_{t+1} \mid y_t) < y_t \Rightarrow E(y_{t+1} - y_t \mid y_t) = E(\Delta y_{t+1} \mid y_t) < 0$.

3. Based on your answers to the previous questions, explain the intuition of the Dickey-Fuller.