

1. Consider an AR(1) process with $x_0 = 10$, intercept $\mu = 0$, and AR coefficient $\rho = .5$:
 - a. At time 0, the expected value one-period ahead is $E_0[x_1] = 10 \cdot .5 = 5$
 - b. At time 0, the expected value ten-period ahead is $E_0[x_{10}] = 10 \cdot (.5)^{10}$
 - c. At time 0, the unconditional expected value of x is zero.
 - d. All of the above

2. Consider an ARMA(1,1) process with $x_0 = 10$, intercept $\mu = 0$, AR coefficient $\rho = 0.5$, and MA coefficient $\theta = 0.5$ (follow our convention and put a minus in front of the MA component).
 - a. At time 0, the expected value one-period ahead is $E_0[x_1] = 10 \cdot .5 = 5$
 - b. At time 0, the expected value one-period ahead is $E_0[x_1] = \mu$
 - c. At time 0, the expected value one-period ahead is $E_0[x_1] = 10 \cdot (.5 + .5) = 10$
 - d. None of the above

3. In the data, US excess returns:
 - a. can be predicted with a positive sign by the log dividend-price ratio
 - b. can be predicted with a positive sign by the cay indicator constructed by Lettau & Ludvigson
 - c. feature an MA component when you forecast them with a univariate approach
 - d. all of the above

4. Consider a panel of data for 25 stocks over a sample of 240 observations. You estimate a 2-factor model and use a Fama MacBeth procedure
 - a. You will have 240 estimates of the 3 market prices of risk
 - b. You will have 25 X 240 estimates of the betas of the returns
 - c. You will have 240 estimates of the 2 market prices of risk that you can use to compute the Fama-MacBeth estimator.
 - d. All of the above

5. This question refers to the Python assignment. What is your estimate of the market price of risk for factor 1 and its standard error (s.e.) at the end of the Fama-MacBeth procedure?
 - a. Lambda 1 is equal to 0.022 with s.e. 0.013
 - b. Lambda 1 is equal to 0.126 with s.e. 0.05
 - c. Lambda 1 is equal to 0.09 with s.e. 0.085
 - d. Lambda 1 is equal to 0.01 with s.e. 0.096.

6. This question refers to the Python assignment. What is your estimate of the market price of risk for factor 2 and its standard error (s.e.) at the end of the Fama-MacBeth procedure?
 - a. Lambda 2 is equal to 0.01 with s.e. 0.06
 - b. Lambda 2 is equal to 0.05 with s.e. 0.013
 - c. Lambda 2 is equal to 0.1 with s.e. 0.084
 - d. Lambda 2 is equal to 0.145 with s.e. 0.067