1. Consider the linear regression model
\[ y = \beta_0 + \beta_1 x + \varepsilon, \]
where \( x \) is a scalar regressor and \( \varepsilon \) is a disturbance term. The least squares estimator computed from a sample of \( n \) i.i.d. disturbances is given by
\[ \hat{\beta}_n = (X'X)^{-1}X'y, \]
where
\[ X = \begin{bmatrix} 1 & x_1 \\ 1 & x_2 \\ \vdots & \vdots \\ 1 & x_n \end{bmatrix} \]
and
\[ y = \begin{bmatrix} y_1 \\ y_2 \\ \vdots \\ y_n \end{bmatrix} \]
Assume that
\[ E(\varepsilon|x) = \exp(-n), \]
and that
\[ \lim_{n \to \infty} \frac{X'X}{n} = Q, \]
where \( Q \) is a positive definite matrix. Is the OLS estimator \( \hat{\beta}_n \) unbiased? Is it consistent?

2. W 4.1
3. W 4.4
4. W 4.8
5. W 5.2