10. A researcher wants to collect data about the study habits of sophomores at Harmond University. From the sophomore class of 2,300 students, she wants to collect a sample of 70 students.

Which of the following sampling methods will yield the most representative sample?

* Assigning each sophomore a number and then randomly generating 70 numbers from that list.
* Randomly selecting 70 sophomores entering the university's main library on a randomly selected evening.
* Selecting the 70 sophomores whose grade point averages (GPA) fall closest to the mean GPA of the sophomore class.
* Randomly selecting 70 sophomores who are members of college fraternities.

28. The regression analysis below relates US annual energy consumption in trillions of BTUs to the independent variables "US Gross Domestic Product (GDP) in trillions of dollars" and "average gas mileage of all passenger cars in miles per gallon (mpg)."

Which of the two independent variables is significant at the 0.01 level?

* GDP only.
* Average car gas mileage only.
* Both independent variables.
* Neither independent variable.



Energy Consumption, GDP, and Gas Mileage

29. The regression analysis below relates US annual energy consumption in trillions of BTUs to the independent variables "US Gross Domestic Product (GDP) in trillions of dollars" and "average gas mileage of all passenger cars in miles per gallon (mpg)."

The coefficient for the independent variable "average car gas mileage (mpg)," -70.50, describes:

* The relationship between energy consumption and average car gas mileage, controlling for GDP.
* The relationship between energy consumption and average car gas mileage, not controlling for GDP.
* The relationship between average car gas mileage and GDP, controlling for energy consumption.
* The relationship between average car gas mileage and GDP, not controlling for energy consumption



Energy Consumption, GDP, and Gas Mileage