Quiz 5: Modeling Probabilities

Name: _____ Grade: ___/5

1. What is one potential issue with the linear probability model?

    a) It is always homoskedastic, requiring complex adjustments.
    b) It may predict probabilities that are less than zero or greater than one.
    c) It cannot handle more than two explanatory variables.
    d) It is too computationally intensive for modern computers.

2. What is the primary goal of "classification" in the context of binary y variables?

    a) Predicting the exact probability of y = 1 for target observations.
    b) Visualizing the relationship between predicted probabilities and actual outcomes using a calibration curve.
    c) Assigning target observations to either the y = 1 or y = 0 category based on a predicted probability.
    d) Identifying potential outliers in the dataset that could skew the results of the analysis.

3. In the context of probability models, what are the "logit" and "probit" models designed to address?

    a) The issue of non-linearity in the relationship between explanatory and dependent variables.
    b) The need to account for heteroskedasticity in binary outcome data.
    c) The challenge of interpreting the coefficients of linear probability models.
    d) The problem of linear probability models potentially predicting probabilities outside the range of 0 to 1.**

4. According to the excerpt, how do the predicted probabilities from logit and probit models typically compare?

    a) They are usually very similar.
    b) Logit models tend to predict higher probabilities than probit models.
    c) Probit models are more accurate when the actual probabilities are close to 0 or 1.
    d) The choice between logit and probit significantly impacts the interpretation of the results.

5. How do marginal differences relate to the coefficients of linear probability models?

    a) Marginal differences are the inverse of the corresponding LPM coefficients.
    b) Marginal differences are always smaller in magnitude than LPM coefficients.
    c) Marginal differences often have a similar interpretation to LPM coefficients.
    d) There is no meaningful relationship between the two concepts. of the coefficients and marginal differences.