After Completing Training: For these questions, choose the best (most correct) answer, based on your knowledge of NIH research ethics guidelines, policies, and regulations and your ethical judgment.

Case 1:

Dr. S has conducted 20 experiments examining the relationship between exposure to an industrial compound and inflammation in human epithelial cells. 15 of the experiments showed an inflammatory response but 5 did not. Dr. S submits a paper for publication that reports the results of the 15 experiments where inflammation occurred but he does include the data from the 5 experiments where it didn't occur. He does not mention or explain the omission of the data in the paper. The evidence presented in this example indicates Dr. S's behavior is probably:

A: Falsification of data. **B:** Fabrication of data. **C:** A and B are correct **D:** None of the above

Case 2:

Mr. Y is a graduate student working in a pharmacology laboratory. The experimental protocol requires him to perform 50 animal dosing studies and he has completed only 40. Feeling pressed to produce results by a deadline set by his supervisor, Mr. Y uses a statistical algorithm to generate plausible results for the remaining 10 studies, based on the previous 40. The evidence presented in this example indicates Mr. Y's behavior is probably:

A: Falsification of data. **B:** Fabrication of data. **C:** A and B are correct **D:** None of the above

Case 3:

Dr. H has been attempting to produce a digital image of the structure of a protein. Each image that he has taken includes an unexplained blob that obscures the protein's structure. To produce a "clean" image, Dr. H uses a digital image manipulation program to cut out the blob from one image and replace it with an unobscured part from a different image. He submits the image for publication without explaining how it has been manipulated. The evidence presented in this case indicates that Dr. H's behavior is probably:

A: Falsification of data. **B:** Fabrication of data. **C:** A and B are correct **D:** None of the above

Case 4:

Dr. P, an oncologist, publishes a paper that uses a novel statistical method to predict responsiveness to chemotherapy based on genetic markers in tumors. Dr. B, a biostatistician, reads the paper and writes a scathing letter to the editor accusing Dr. B of using deceptive and inappropriate statistical methods. He claims that the main findings of the paper are not supported by the data. He asks the journal to retract the paper and wants Dr. P's institution to investigate this as misconduct. Based on the facts of this case one can reasonably conclude that:

A: Dr. P did not commit misconduct, because this dispute boils down to a difference of scientific opinion.

B: Dr. P may have committed misconduct if there is evidence that he used statistical methods to fabricate or falsify data.

C: The editor of the journal should immediately retract the paper because its findings are unreliable.

D: Both A and C are correct.