To answer this multiple choice question as a high quality graduate statistics student, let's analyze each option in the context of log-transformed data:

(A) \*\*The median of the logged values does not equal the log of the median.\*\*

- This statement is true, but it is not the primary issue when interpreting results on the original scale. The median is not directly related to the mean, which is what we are typically concerned with in t-tests.

(B) \*\*The log-transformed data are not symmetric.\*\*

- While log-transformation often makes data more symmetric, this is not the core issue with interpretation. The problem lies in how the transformation affects the mean.

(C) \*\*The original data is not symmetric; therefore, the median does not equal the mean.\*\*

- This is true, but again, it does not directly address the issue with the mean of log-transformed data.

(D) \*\*The mean of the logged values does not equal the log of the mean.\*\*

- This is the correct answer. When data is log-transformed, the mean of the logged values (i.e., \( \text{mean}(\log(X)) \)) is not equal to the log of the mean of the original values (i.e., \( \log(\text{mean}(X)) \)). This discrepancy makes direct interpretation of t-test results on the original scale problematic because the results of the t-test are about the mean difference in the log scale, not the original scale.

Therefore, the correct answer is:

(D) \*\*The mean of the logged values does not equal the log of the mean.\*\*