

It is a well known fact in a First Year Calculus course one gets a question like :

$$\int_a^b x^c dx = \begin{cases} \frac{b^{c+1} - a^{c+1}}{c+1}, & \text{if } c \neq -1 \\ (b \ln b - a \ln a) - (b - a), & \text{if } c = -1 \text{ and } a, b > 0 \end{cases},$$

with some simple choices of the parameters a , b and c .

I want the question to be set with parameters, the parameters being a , b , c , as above and the answers being also set parametrically. For example, I have attached a Python code which achieves this, i.e., each run of the program produces a \LaTeX code for the question with random choices of the parameters and answers accordingly.

My Question : Shall it be possible to include this facility into AMC ?

For instance, the `onecopy` only shuffles the same answers; here alongwith it I want different versions of the paper with `onecopy` to have different values of the parameters a , b and c , so that the question papers not only have the choies shuffled but the content also different. So, to produce this one needs to have each run of `onecopy` to be preceeded by a Python Code like this where the parameters are passed, which is to be taken in by the run of `onecopy`.

The Python program and its output is attached herewith.