

## Notation conventions for answers in online quizzes

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1. **Do not put any spaces in your answers.** The answer will not match.
2. When asked for the dominant term, write JUST the term, no multiplication constant.
3. Change of variable with summation: Use new variable name  $x$  and use name  $p$  for the last value the variable  $x$  takes. In the closed form the answer can have  $p$  (to make things simpler), BUT the final answer for  $\Theta$ , cannot have  $p$  or  $x$  in it. It must be the correct answer for  $\Theta$  for that piece of code.
4. If you are in doubt about what notation to use, contact the instructor if possible. **If not, put a comment on a piece of paper and hold it up in front of the camera during the quiz and email, or send a chat to the instructor after you finish the quiz. In your message include the time when this happened (not the clock time, but out of the 60 minutes of the quiz). If you can interpret a question in 2 ways, give the answer for both ways: one answer can be provided in the quiz and the other can be written on paper and shown to the camera while explaining the issue.**
5. Use the notation  $^$  to show the exponent. E.g. to write  $5^3 = 5^3$ ,  $n^2 = n^2$ ,  $n^x = n^x$ ;  $n^{2+x} = n^{2+x}$
6. Use the notation  $_x$  to show subscript  $x$ . E.g. to write  $\log_2 n = (\log_2(n))$  and  $\log_{2a+b} n = (\log_{2a+b}(n))$ .
7. Always use  $()$  for log. E.g.  $\log_2 n = (\log_2(n))$ ,  $\lg 10 = (\lg(10))$ .
8. If an answer for Theta includes a log function in it, the log should have the base derived from the math (e.g.  $(\log_5(N))$ ). Use  $\lg$  ONLY for  $\log_2$ . For any other log explicitly give the base. The answer will be wrong if the wrong log is used. E.g. using  $\lg$  instead of  $\log_{10}$  or  $\log_7$  will not receive any credit.
9. Parenthesize every component that has an exponent and is multiplied in an expression and do NOT put any spaces. E.g.  $MN = MN$ ,  $M^2 N \lg N = (M^2)N(\lg(N))$   $MN(\log_3(S))/S$
10. Order of symbols in an expression:
  - a. If an answer includes several types of function multiplied, list them from the fastest growing to the lowest: exponent, polynomial, log, division. E.g.  $(N/U)M^2 2^{MN} \log_4 T = (2^{\{MN\}})(M^2)N(\log_4(T))/U$  [You will probably not have such complex expressions, but I wanted to give a complex example.]
  - b. If several variables show in a term, use the alphabetical order. E.g. use  $MN$  not  $NM$ . Rule a above takes precedence over this one.
11. Give just the answer. E.g.:
  - a. " $A=\{1,7,2,6,0\}$ " should be just: "1,7,2,6,0".

- b. " $f(n) = (n^2)+3n$ " should be just: " $(n^2)+3n$ "
- c. If you need to give the Theta or Big-Oh or Omega, give just the function, not the symbol. E.g. " $\Theta(n^2)$ " should be just " $(n^2)$ ".