Serious Algebra and Calculus Errors

Below is a list of serious errors from Exam 1 (both sections). Please review the errors and correct each of them.

Warning: Errors on this list will be severely penalized on future exams.

- \( e^{x+c} = e^x + e^c \)
- \( \frac{1}{x + y} = \frac{1}{x} + \frac{1}{y} \)
- \((a + b)^2 = a^2 + b^2\)
- \(\sqrt{x + y} = \sqrt{x} + \sqrt{y}\)
- Simple integrals such as
  \[
  \int e^{3t} \, dt = 3e^{3t} + C
  \]
  \[
  \int \frac{dx}{1 - x} = \ln |1 - x| + C
  \]