

REVIEW SUGGESTIONS FOR THE FINAL EXAMINATION

(continued)

The following formula will not be on the formula sheet, but it probably should have been included, and it is very likely that it will be needed or at least useful (for example, it helps when computing the derivative of something like x^x).

Logarithmic differentiation formula:

$$\frac{dy}{dx} = y \cdot \frac{d}{dx} \log y$$

Here is a more detailed breakdown of the exam into content:

25 points. Differentiation of transcendental functions (logarithmic, exponential, inverse trigonometric).

60 points. Evaluating indefinite, definite and improper integrals (4 examples total).

115 points. Applications of integrals to the sorts of problems considered in Chapters 8 and 11 (also see remarks in the first review document). There will be 5 such problems on the exam. As noted before, there will be a sheet of formulas and identities that may be useful.

There will not be any lists of indefinite integrals or derivatives.

Some problems will be simplified to eliminate the need to go through all the steps. For example, information about the value of some definite integral may be given, or it will not be necessary to evaluate such an integral explicitly.