

Math 122 Sections 6.2-6.3 Study Guide

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Problem 1) Evaluate the following indefinite integrals:

- $\int e^x dx$

- $\int x^7 dx$

- $\int 5x^4 dx$

- $\int e^x dx$

- $\int \frac{1}{2x} dx$

- $\int 2\pi r dr$

- $\int (3x^2 + 4x + 5) dx$

- $\int (x^2 + 2^x) dx$

Problem 2) Evaluate the following definite integrals. [**Note:** On a quiz/exam, show all steps, as if you were evaluating an indefinite integral. As a rule of thumb, if you are asking “how much work do I have to show before I can use the integral function on my calculator?”, then you are likely not showing enough work.]

- $\int_1^2 (3x^2 + 2x + 1) dx$

- $\int_{-1}^1 (-x^2) dx$

- $\int_{-3}^3 x^3 dx$

- $\int_{-2}^3 (2^x + e^x) dx$