

Math 3C, Review Problems

The prerequisite for Math 3C is Math 3B. You will need to know about integrals. Here are two examples.

Review problem:

$$\int_0^{\infty} x e^{-\lambda x} dx = \frac{1}{\lambda^2} \quad (\lambda > 0)$$

This problem involves integration by parts (§7.2), improper integrals (§7.4), and L'Hôpital's rule (§5.5). We will need this integral for the expected value of the exponential distribution in §12.5.4.

Review problem:

$$\int_0^{\infty} x e^{-x^2/2} dx = 1$$

This problem involves substitution (§7.1), ... We will need this integral for the expected value of the normal distribution in §12.5.2.