Math 266B

Guide for Test 2

Here are some sample questions from old tests. Some topics that we covered are not represented by these questions, but are still fair game.

1. Compute

(a) \[ \int_{2}^{3} x \sin(5x) \, dx = \]

(b) \[ \int_{3}^{4} 7x e^{x^2} \, dx = \]

(c) \[ \int 7x^2 e^x \, dx = \]

(d) \[ \int x^2 \sqrt{x - 2} \, dx = \]

(e) \[ \int_{0}^{3} \frac{1}{\sqrt{x}} \, dx = \]

(f) \[ \int_{3}^{\infty} \frac{1}{\sqrt{x}} \, dx = \]

(g) \[ \int_{3}^{\infty} \frac{1}{x^2} \, dx = \]

(h) \[ \int x e^{-3x} \, dx = \]

(i) \[ \int \frac{5}{x^2 + x - 2} \, dx = \]

(j) \[ \int \frac{x \ln(1 + x^2)}{1 + x^2} \, dx = \]

(k) \[ \int_{1}^{4} (x - 2)^{-1/3} \, dx = \]

(l) \[ \int x \ln(x) \, dx \]

(m) \[ \int \frac{\ln(x)}{x} \, dx \]