

# Take-Home Quiz 1

Math 133 Section 22

Due Monday, April 10

**Problem 1. (3 points).** Compute the following:

$$\int \sin x \cdot e^{\cos x} dx.$$

**Problem 2. (3 points).** Compute the following:

$$\int (\cos^3 x + \sin 2x \cos x) dx.$$

**Problem 3. (3 points).** Compute the following:

$$\int x \sqrt[3]{x+2} dx.$$

**Problem 4. (3 points).** Compute the following:

$$\int \sqrt{5 - 4x - x^2} dx.$$

*Hint:* Complete the square.

**Problem 5. (3 points).** Compute the following:

$$\int \frac{2x - 3}{\sqrt{1 - x^2}} dx.$$