QUIZ 9 - MATH 112   Friday, April 2

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Read each problem **very carefully** before starting to solve it. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Compute the following integrals:

   (a) $\int (6x^2 + 12x^5)dx =$

   (b) $\int \left(5\sqrt[3]{x} - \frac{1}{x^2} \right) dx =$

   (c) $\int 14e^{7x} dx =$

   (d) $\int \frac{x^3 - 7x^2 + x}{x^2} dx =$

2. Suppose a company's marginal cost function is given by

$$\mathrm{MC}(x) = 32\sqrt[5]{x^3},$$

where x is the number of items produced (in thousands) and the cost is measured in thousands of dollars. Find the cost function $C(x)$, if it is given that it costs \$50,000 to produce 1000 items.