

**Name:** \_\_\_\_\_

**VIP ID:** \_\_\_\_\_

- Write your name and VIP ID in the space provided above.
  - The test has three (3) pages, including this one.
  - Credit for each problem is given in parentheses at the right of the problem number.
  - No books, notes or scratch paper may be used on this test.
  - An approved calculator may be used on this test.
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**Problem 1** (10 pts each). Compute the antiderivative of the following functions:

$$\int (5 - 3x - 6x^6) dx$$

$$\int (2^x + 5 \cdot 7^x - 8e^x) dx$$

$$\int \left( \frac{2}{x} - \frac{5}{6x^2} - \frac{6}{\sqrt{x}} \right) dx$$

$$\int (x^3 - 7)^2 dx$$

$$\int \frac{x^2 - x}{x^5} dx$$

**Problem 2** (10 pts each). Compute the antiderivative of the following functions:

$$\int x^6(15 - x^7)^{12} dx$$

$$\int 6x4^{x^2} dx$$

$$\int \frac{3x^2}{8x^3 - 5} dx$$

$$\int 13 \cdot 2^{4x} dx$$

$$\int \frac{e^{\sqrt{y-2}}}{\sqrt{y-2}} dy$$