

YOUR NAME: _____

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

1. Compute the derivatives

(a) $(x^3 e^{x^2})' =$

(b) $(\sqrt[3]{x^4 + 2 \ln x})' =$

2. Compute the integrals:

(a) $\int (14\sqrt[4]{x^3} + \frac{6}{\sqrt{x^5}})dx =$

(b) $\int \frac{x^3 + 3x}{\sqrt{x}}dx =$