## QUIZ 7 - MATH 112 Your Name:

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. Find the derivatives of

(a) 
$$f(x) = \sqrt{x^3 + 3\ln x}$$

(b) 
$$f(x) = x^7 e^{13x}$$

2. Find the integrals

(a) 
$$\int (12\sqrt{x^5} + \frac{3}{\sqrt{x}}) \mathrm{d}x$$

(b) 
$$\int x^3 (2x-3)^2 \mathrm{d}x$$