

3. [13 points] Compute the exact values of the following integrals. Show all of your work.

a. [4 points] $\int_{-\sqrt{\pi}}^0 2x \sin(x^2) \, dx$

Answer: _____

b. [4 points] $\int_1^e x^p \ln(x) \, dx$, where p is a **positive** constant. Your answer may involve the letter p .

Answer: _____

c. [5 points] $\int_4^9 e^{\sqrt{x}} \, dx$

Answer: _____