

# (Pseudo) Homework Assignment

SDS 321 Intro to Probability and Statistics

1. Read 3.1 -3.3 from Bertsekas and Tsitsiklis.
2. Evaluate the following integrals. For (c)-(f), you will have revisit/learn integration by parts. These will come in handy for continuous random variables. Show your calculations.
  - (a) (1 pt)  $\int_0^{\infty} \exp(-2x - 3)dx$
  - (b) (1 pt)  $\int_0^{\infty} \exp(-x/2)dx$
  - (c) (2 pts)  $\int_0^{\infty} x \exp(-2x)dx$
  - (d) (2 pts)  $\int_0^{\infty} x \exp(-x/2)dx$
  - (e) (2 pts)  $\int_0^{\infty} x^2 \exp(-2x)dx$
  - (f) (2 pts)  $\int_0^{\infty} x^2 \exp(-x/2)dx$