

Name: _____ Section (circle one): 9 am 10 am

Math 461, Sections B/C, Spring 2009
HW Assignment 9, due Friday, 4/17/2009

Instructions

- **Write your name on the cover sheet and staple the sheet to the assignment.** Do the problems in order, and make sure that each problem is clearly labelled. The assignment is due in class on the above due date.
- **About this assignment.** This assignment is on Chapter 6 through 6.5, and the class material covered through Monday (4/13). Topics on this assignment include the distribution of sums, quotients, and similar combinations of independent r.v.'s, sums of independent normal r.v.'s, and conditional distributions (discrete and continuous cases).

Hints and comments

- **Make sure to specify ranges:** For problems asking for densities or p.m.f.'s (both single/marginal and joint), make sure to specify the range, i.e., the set of values on which the density/p.m.f. "lives", along with the formula. This range is crucial in determining the correct integration limits when computing expectations, probabilities, and marginal densities. (Problem 8 from HW 8, and Self-Test Problem 3 illustrate this point.)
- **Problem 49:** This is an easy illustration of the min/max trick discussed in class.

HW 9 Problems (Chapter 6, pp. 313–319)

1. #27(a)(b)
2. #29
3. #32(a)(b)
4. #33(a)(b)
5. #39(a)(b)(c)
6. #40(a)(b)
7. #41(a)(b)(c)
8. #42(a)(b)
9. #43
10. #49(a)(b)