

Math 408, Spring 2008  
HW Assignment 2, due Friday, 2/1/2008

**Name (print please):**

**Instructions**

- Use this sheet as cover sheet and staple it to the assignment.
- Write your name **legibly** in the space above; if necessary, underline your last name. If your name is not clearly and unambiguously identifiable on the class roster, we cannot credit you for the homework.
- Do the problems in order, and make sure that each problem is clearly labelled.
- Show all work; an answer alone will not earn credit.
- **Due date:** The assignment is due **in class** Friday this week; late homework, or homework dropped off in mailboxes, will not be accepted. You can, however, turn in the homework early, in my office, 241 Illini Hall, any time before the due date.
- **Open House:** Wednesdays, 5 pm - 6 pm (longer if necessary), 141 Altgeld. This is an informal office hour for students in my classes (Math 370, 408, 453). Feel free to stop by with questions about the homework or anything else relating to this course!

**HW 2 Problems (from Hogg/Tanis, 7th edition)**

**About these problems:** Most are routine applications of appropriate settheoretic/probabilistic formulas and rules. Venn diagrams often help in visualizing what is going on. Problem 7 in 1.5 asks for probabilities that exactly one (or exactly two) of three given events occur. Problems of this type (involving three events) are important and frequently show up in actuarial exams. They can be solved through careful analysis using Venn diagrams and the area rule of thumb, as has been illustrated in class and the discussion sections. Problem 8 in 1.5 is of the same type as Problem 7, with  $A, B, C$ , corresponding to the events  $A_1, A_2, A_3$  in #7, except that in #8 the probabilities for these events are not given and first have to be derived/assigned; this, however, is quite easy.

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|--------------------|---------------------|
| 1. Section 1.4: 20 | 7. Section 1.6: 4   |
| 2. Section 1.5: 2  | 8. Section 1.6: 5   |
| 3. Section 1.5: 3  | 9. Section 1.6: 6   |
| 4. Section 1.5: 5  | 10. Section 1.6: 9  |
| 5. Section 1.5: 7  | 11. Section 1.6: 10 |
| 6. Section 1.5: 8  |                     |