

Due Tuesday, Sept 18

Solve the following problems and staple your solutions to this cover sheet.

1. Exercise 2.12
2. Exercise 2.16
3. Exercise 2.17
4. Exercise 2.37
5. Exercise 2.38
6. Exercise 2.47
7. Exercise 2.50
8. Exercise 2.59
9. A fair coin is tossed four times, and the sequence of the heads and tails is observed. List all elements of the sample space. Let events A , B , C and D be given by $A = \{\text{at least 3 heads}\}$, $B = \{\text{at least 2 heads}\}$, $C = \{\text{heads on the third toss}\}$, and $D = \{\text{1 head and 3 tails}\}$. Find $P(A)$, $P(A \cap B)$, $P(B)$, $P(A \cap C)$, $P(D)$, $P(A \cup C)$, and $P(B \cap D)$.
10. If five people are randomly seated in a row of five seats, what is the probability that a particular two of them are not sitting next to each other?