

HOMEWORK #2

Due Friday, October 19, 2007 (5:00 p.m.) (new due date)(revised)

Reading: Read Chapters 3 and 4

Problems:

1. Problem 2.26
2. Problem 3.3
3. Problem 3.7
4. Problem 3.20
5. Problem 3.28
6. Problem 3.35
7. Show that the power set \mathcal{P} of the finite sample space Ω with n outcomes has 2^n elements.
8. For the events A , B , and C in Ω , prove the following:

$$|P[A] - P[B]| \leq P[A \oplus B] \tag{1}$$

$$P[A \oplus B] \leq P[A \oplus C] + P[B \oplus C] \tag{2}$$