Assignment

Math21a

Due Tuesday May 9th 2006

1. §4.8 (On page 50)

2. §4.10 (On page 50)

3. A hand of 13 cards is dealt from a shuffled deck. Find the probability that the hand has the following properties.

   (a) A distribution of suits 4, 4, 3, 2. (For example four spades, four hearts, three diamonds and two clubs. Or four diamonds, three clubs, three spades and two hearts...)

   (b) A distribution of suits 5, 3, 3, 2

4. Pick a point x at random (with unifrom density) in the interval [0,1]. Find the probability that $x > 1/2$, given that

   (a) $x > 1/4$

   (b) $x < 3/4$

   (c) $|x - 1/2| < 1/4$

   (d) $x^2 - x + 2/9 < 0$