Department of Mathematics
College of William & Mary

MATH 451/551

Chapter 2. Introduction

2.3 Computing Probabilities

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Computing Probabilities

Example 1

Three men and two women sit in a row of chairs in a random order. Let the event A be that men and women alternate (that is, MWMWM). Find $P(A)$.

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Example 2

Karen collects n hats and returns them at random. Let the event A be the proper return of the hats to their owners. Find $P(A)$.

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Example 3

Roll a pair of fair ddice 24 times. Let the event A be rolling double aces (that is, double ones) at least once. Find $P(A)$.

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Example 4

A five-card poker hand is dealt from a well-shuffled deck. Let the event A be that there are exactly 2 kings in the hand. Find $P(A)$.

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Example 5

A five-card poker hand us dealt from a well-shuffledd deck. Let the event A be dealing a full house. Find $P(A)$.

Computing Probabilities

Example 6

A five-card poker hand is dealt from a well-shuffled deck. Let the event A be dealing two pair. Find $P(A)$.

Computing Probabilities

Example 7

A five-card poker hand is dealt from a well-shuffled deck. Let the event A be dealing a straight. Find $P(A)$.

Computing Probabilities

Example 8

A five-card poker hand is dealt from a well-shuffled deack. Let the event A be dealing two pair. Find $P(A)$.

Computing Probabilities

Example 9

A dozen eggs contains 3 defectives. If a sample of 5 is selected from the dozen at random,

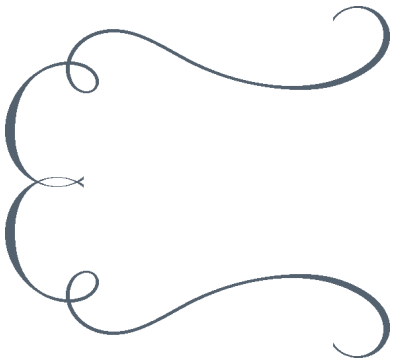
1. find the probability that the sample contains exactly 2 defectives,
2. find the probability that the sample contains 2 oor fewer defectives.

Computing Probabilities

Example 10

A bag contains 15 billiard balls numbered 1 through 15. Five balls are randomly drawn from the bag without replacement. Let the event A be exactly two odd-numbered balls are drawn from the bag and they occur on off-numbered draws. Find $P(A)$.

Thank You



THANK YOU!