

MA162: Finite mathematics

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SCHEDULE:







- Exam 4 is Thursday, December 13th, 6pm to 8pm in:
CB110 (Sec 001, 002), CB114 (Sec 003, 004), FB200 (Sec 005, 006)
- HW 7C is due Friday, December 7th, 2012

Today we will more of the practice exam problems
(and the practice exam itself should be available on Thursday)
(Family sickness)

Final Exam Breakdown

- Chapter 7: Probability
 - Counting based probability
 - Empirical probability
 - Conditional probability
 - Conditional probability
- Cumulative
 - Ch 3: Graphically solving a 2 variable LPP

Practice Exam #1

- Dice have six sides: , , , , , . Coins have two sides: H or T.
- 1. (a) What is the probability of rolling at least two sixes on four dice?
- (b) What is the probability of rolling a “double” on three six-sided dice?
- (c) What is the probability of getting “at least four in a row” if you flip a coin seven times?
- (d) What is the probability of getting more than twice as many heads as tails if you flip a coin ten times?
- (e) What is the probability of rolling strictly more 1s in five rolls than heads in five flips?

Practice exam #3

- 3. A company is trying out an ad campaign to increase visits.
- (a) People who have not seen the new advertisement have a 2% chance of stopping by the store, but people who have seen it have a 30% chance of stopping by. Only 10% of people have seen the ad. What is the probability that someone who stops by the store has seen the ad?
- (b) The company decides to spend less money on advertisements, since (in their own words) “so many people have already seen it.” The next month, people who not seen the advertisement recently (or at all) have a 2% chance of stopping by the store, but people who have seen it recently have a 30% chance of stopping by. Only 1% of people have seen the ad.

What is the probability that someone who stops by the store has seen the ad?

- (c) What percentage of people ended up stopping by the store during the 1% campaign? How does this compare to the 10% campaign?

Practice exam #4

- 4. A company wants to determine when to replace its machine belts. It would prefer to replace them before they fail, but would also prefer not to waste them. It finds a data-sheet from the belt manufacturer with some failure probabilities recorded.
- (a) 100% of belts last 30 days or more. 80% of belts last 60 days or more. 50% of belts last 90 days or more. 20% of belts last 120 days or more. What is the probability that a belt that lasted 60 days will last 120 days or more?
- (b) What is the probability that a belt that has lasted 90 days will fail within the next 30 days?
- How much do they expect to pay if they replace belts every 60 days?