Monday, January 16

Today’s Readings

• King, I Have a Dream (optional, available from web page)

Other Items Due Today

• Probability problems
• Summary/study sheet for your assigned reading.
• 7 Critical Components assignment

Class

• Devotions: I have a dream, MLK
• Probability
  – conditional probability
  – expected value
  – lottery and casino examples
• Don’t Look in the Bag!

Looking Ahead

For Tuesday

• Reading
  – view The Mission
  – Plantinga, Ch. 4, Redemption
  – From the DCM Reader:
    * Chapter 5 Introduction
    * Yancey, The Good, the Bad, and the Redeemed
    * Anker, The Jesuits and the Guarani
    * Anker, Redemptive Themes in the Mission (optional)
• Probability problems 7–10. Be sure to show your work.
• Prepare for quiz. The quiz will include some questions on probability in addition to items about The Mission and the readings.
Probability Problems

Be sure to **show your work** as you do these problems.

7. The table below shows the probabilities for a random variable $X$.

<table>
<thead>
<tr>
<th>$X$</th>
<th>0</th>
<th>1</th>
<th>5</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>probablity</td>
<td>.5</td>
<td>.3</td>
<td>.1</td>
<td>.1</td>
</tr>
</tbody>
</table>

What is $E(X)$ (the expected value of $X$)?

8. Suppose you roll 5 fair 6-sided dice, what is the probability that at least two of them match?

9. The Daily 4 game works just like the Daily 3 game, except four numbers are selected. If you “play it straight”, you win if your four numbers match the ones drawn at the lottery (in the exact order). The prize is $5000.
   a) What is the probability of winning the $5000 prize?
   b) What is the expected value of such a lottery ticket?

If you “play it boxed”, you only have to match the numbers, but not necessarily the order. So for example, 1234 matches 3421.
   c) If you have a ticket with the number 1123, what is the probability of winning “playing it boxed”?
   d) What prize value should be assigned to this ticket so that it has the same expected value as the “play it straight” ticket?

10. If you roll a four-sided die (sides labeled 1, 2, 3, and 4) and a six-sided die (with standard labeling), what is the probability of rolling doubles? What is the probability that the four-sided die has a larger number than the six-sided die?
Midterm Exam Information

In-class portion

- The exam will be at 2:00 on Wednesday. We will resume class at 3:45.
- You will be provided with a list of all the readings/talks and the authors/speakers. Use this to refer to authors by name and to refresh your memory about what we have read.
- Some advice on short-answer responses.
  - Typically, good short answer responses will be between a couple sentences and a paragraph in length.
  - Be sure you answer the question asked and not some other question. Read the question carefully, then reread it.
  - When grading short answers, I am looking for things like completeness, clarity, accuracy, conciseness, focus, and importance in addition to correctness. In short, I am looking for high quality answers. So be thoughtful as you answer these questions. If asked for examples, pick particularly clear ones. If asked for reasons, pick especially important ones. Do not add lots of unnecessary information hoping to “cover your bases”.

Midterm Essay

Your midterm essay is due at the time of the midterm exam. Essays should be typed and approximately 3–4 pages long. In organizing your essays, do not forget to consider and address possible objections that might be raised to your position (or the position you are describing).

Write an essay on one of the following topics.

- Plantinga argues that despite the Fall and evil in the world, Creation is ultimately good. (See the beginning of Chapter 3, for example.)
  - What is his evidence for his claim? Is there support for his position in other things we have read or heard?
  - What are the most important consequences (for a Calvinist) to this claim?
  - The ultimate goodness of creation is part of the Calvinist worldview. Do you think a Christian worldview requires you to agree with his argument? Why or why not?

- Give a well-supported response to consumerism, as defined by Rodney Clapp. Your essay should draw not only on Clapp’s article, but on other things we have read and discussed and should demonstrate how your position corresponds to a worldview position, but it need not be a Calvinist worldview.

- Write your own question. Email it to me for approval. If I approve of your question, you may write your essay in response to it.