**Section 12.1**

**Activity 1**

Suppose you are given the choice between one of the following:

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| **Option A - Cards*** Draw one card from a deck of cards.
* If it is a 10 you get an A on the final exam.
* Otherwise, you have to take the final exam.
 | **Option B - Dice*** Roll two dice.
* If they add up to 10 you get an A on the final exam.
* Otherwise, you have to take the final exam.
 |

**Which option would you chose, and why?**

**Activity 2**

What is the probability of rolling a pair of dice and coming up with a 7?

**Activity 3**

I am going to toss three “fair” coins all at the same time.

* What is the size of the sample space? (List all the possible outcomes)
* What is the probability of getting 1 head and 2 tails?
* What is the probability of getting all tails?
* What is the probability that no heads come up?
* What is the probability of all tails OR all heads?
* What is the probability of getting all tails AND all heads?

**Activity 4**

So let’s return to my original question.

* If I was really offering this choice (which I’m not) and you wanted an A on the final, which choice would you pick?