

Name: _____

MATH 110 – EXAM 5
15 November 2004
Dr. Szczepański. Version A.

Directions: There are ten questions on this exam. Answer every question. Show all work and justify your answers. Each question is worth five points.

1. Put the following events in order from least likely to most likely. Indicate your answer by writing the numbers 1–4 next to the events, where 1 is the least likely and 4 is the most likely.
 - someone from this class gets in a car accident in 2005
 - it snows tonight
 - something about the war in Iraq is on the evening news tonight
 - you flip a coin and get heads

2. You have two fair dice.
 - (a) What is the probability of rolling the dice and getting double ones?

 - (b) What is the probability of rolling the dice and getting something that is *not* double ones?

3. Do the following situations involve the “it either happens or it doesn’t” principle? Why or why not?
 - (a) You either roll an odd number on a fair die *or* you roll a four.

 - (b) There is a tornado tomorrow *or* there is not a tornado tomorrow.

8. List the equally likely outcomes of flipping a penny, a nickel, and a dime.

9. Using your answer to the previous problem:

(a) What is the probability of getting at least two heads?

(b) If you know that the dime is heads, what is the probability that you got at least two heads?

10. State the “Infinite Monkey Theorem” and very briefly explain it in your own words.