Name: _____ July 5, 2017

FINITE MATH: QUIZ 4

ADRIAN PĂCURAR

- The Honor Code is in effect for this quiz. All work must be your own.
- Please turn off all cellphones or any other electronic devices.
- Calculators are NOT allowed.
- The bonus question may only bring your score up to a maximum of 10. It is NOT possible to get more than 10 points on this quiz.
- The quiz lasts 8 minutes.

Problem 1. Consider the sample space $S = \{a, b, c, d\}$ consisting of four possible outcomes. You are given probabilities for the following events:

$$P(\{a\}) = 0.2 \qquad P(\{c\}) = 0.3 \qquad P(\{b, c\}) = 0.4$$

a) (1pt) Compute the probability of the event $\{a, b, c, d\}$.

b) (1pt) Compute the probability of the event $\{a, c\}$.

c) (2pt) Compute the probability $P(\{b\})$.

d) (2pt) Compute the probability $P(\{d\})$.

e) (2pt) For the event $E = \{a, c\}$, what is the probability that E does NOT occur?

Problem 2. (2pts) Roll a pair of die, and record the **sum** of the two numbers that come up. What is the sample space for this random experiment?

Problem 3. (BONUS + 1pt) During a survey, 1000 randomly selected participants were asked which movie was their favourite out of Alien, Predator, and Terminator (each participant could only pick one movie). The results of the survey are shown in the table below:

Movie	# of People
Alien	300
Predator	500
Terminator	200

Estimate the probability that a randomly selected citizen liked the movie Alien.