

MATH 233
Fall 2018
Quiz #2 A

Duration: 50 minutes.

Remark: Show your thinking/work. Do not just write a number as a result.

1. A person can take one stair, two stairs or three stairs at a time when climbing a stairway.

- Find a **recurrence relation** for the number of ways to climb n stairs.
- What are the **initial conditions**?
- In how many ways can the person climb a 10-stair stairway?

2. A fair dice and two fair coins are tossed.

- a) What is the **experiment**?
- b) What is the **sample space**?
- c) What is the **size** of the sample space?
- d) What is the probability that a head occurs? (Describe the event E_H)
- e) What is the probability that a 6 occurs? (Describe the event E_6)
- f) What is the probability that the number on the dice is equal to the number of heads or tails? (Describe the event E_{same})