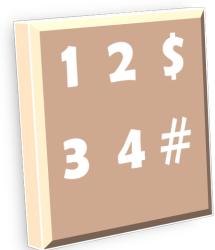
## Theoretical and Experimental Compound Probability

A new locker system for the school has a passcode program on each locker. Students need to input 2 numbers between 1 and 4, followed by 1 symbols (\$ or #).

- 1. Make a tree diagram below to show the possible passcodes that students can use.
- 2. How many unique passcodes are available for the students to choose from?
- 3. What is the theoretical probability that a student will choose a passcode with a number 3 in it?



Tree Diagram

4. Describe a way that you can simulate various passcodes