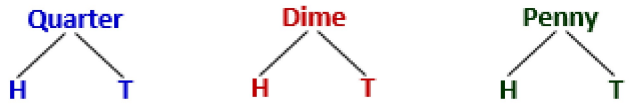
Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Unit 02-05 - Tree Diagrams & Expected Values

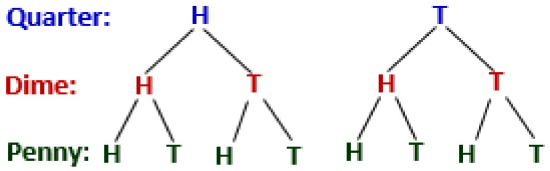
Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Tree Diagram/Area Models
A person accidentally dropped a quarter, a dime, and a penny. Which tree diagram represents the correct possible outcomes of how the 3 coins landed?

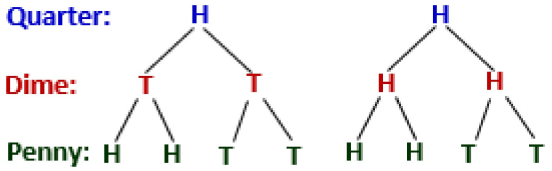
a.



b.

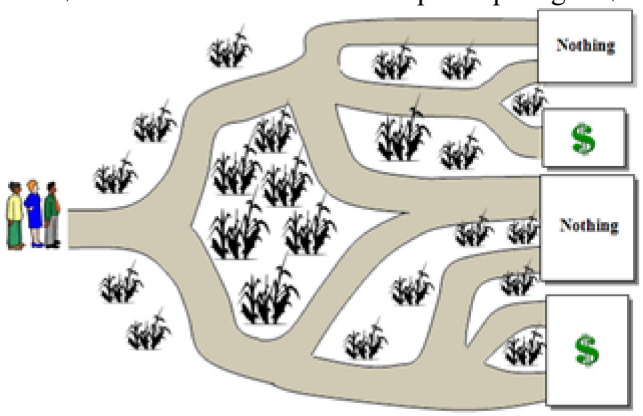


c.



____ 2. **Tree Diagram/Area Models**

The following shows a corn maze for participants to walk through. The participants can only go forward and when there is a fork in the path you may assume that people are equally likely to take any one of the paths. It costs $5 to enter the maze and each participant gets $10 if they come out in a prize area.



Using a tree diagram or an area model determine the probability that a participant wins money?

a. 0.25
b. 0.31
c. 0.43
d. 0.50

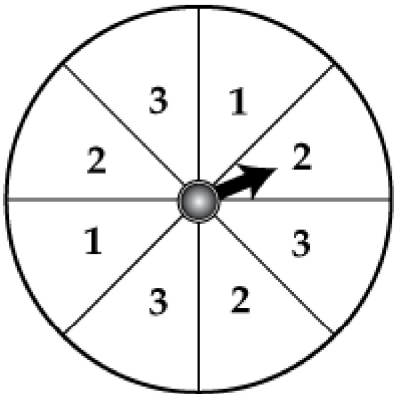
____ 3. **Expected Values**

An insurance company charges a customer $1600 per year for a particular customer's auto insurance. The company has predicted that there is a 10% chance the person will make a claim of on the policy of $5000 (which means the insurance company would lose $3400) and 90% chance that they won't make a claim. What can the insurance company on average expect to make on selling this policy?

a. $940
b. $1020
c. $1100
d. $2900

____ 4. **Expected Values**

What is the expected value of the spinner shown?



a. 1.875
b. 2
c. 2.125
d. 3.25