Carnival Game Tycoon Lecture Notes: Lesson 4   Name:_____
Delta College STEM Explorer

I. **Discrete Probability Distributions**-   defining the elements
          A. Discrete: An _____, _____ value. Ex. U.S paper currency is divided
into _____ monetary values; $1, $2, $5, $10...

          B. Probability Distribution: a representation of data (usually _____) that shows the
          likelihood of _____ of a random variable (X) in a chance
          experiment.

          C. Random Variable: a variable that is _____ by the outcome of a _____
          _____. Ex. Rolling a die: The chance that the random variable will = ___
          is ⅙. But it could also end up being 1,2,3,5, or 6.

II. **Examples of discrete probability distributions**
          A. Rolling 2 dice and adding up the _____.
          B. How many times hospital patients _____ their buzzers for assistance during the night
          C. How many times _____ are awakened by _____ during the night

III. **Examples of non-discrete probability distributions**
          A. _____ tree height in Michigan
          B. Eyelash length of _____ in Uganda
          C. _____ of a population of males in Ohio

IV: **A Practical Example: Results of flipping three coins**
          A. All possible outcomes of three flips:

          _____, _____, _____, _____, _____, _____, _____, _____

          _____   _____   _____   _____   _____   _____   _____   _____

          B. <u>P(X=x)</u>   <u>0</u>   <u>1</u>   <u>2</u>   <u>3</u>
                              ⅛(_____)   ⅜(_____)   ⅜(_____)   ⅛(_____)