**Carnival Game Tycoon Lecture Notes: Lesson 5 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Delta College STEM Explorer **Hour**:\_\_\_\_\_\_

1. **Expected Values**
	1. Defined: The **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of a game is sum of all of the **\_\_\_\_\_\_\_\_\_\_\_**of each value of each outcome and the corresponding probability of that outcome.
	2. Formula: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**until **\_\_\_\_\_\_**outcomes are accounted for
		1. X= the **\_\_\_\_\_\_\_\_\_\_\_\_** of the outcome
		2. P= the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**of the outcome
	3. Application to Games:
		1. Knowing the Expected Value is important for planning **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** games or determining if games are worth **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.
		2. Example “Spinner Game”



* + 1. Use of **\_\_\_\_\_\_\_\_\_\_\_\_\_**



* + 1. Solving for E (Expected Value):
		2. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of the Expected Value #: In this scenario, the Expected Value of **\_\_\_\_\_\_\_** means that you can **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to win on average $.875 per **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.** This is a **\_\_\_\_\_\_\_\_\_\_\_** game for the player and a **\_\_\_\_\_\_\_\_\_** game for the house.