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First Project

Theme parks appeal to several types of people in different ways. They also make money through different areas of the park. I would like to see a mathematical equation that models different aspects of theme parks to see their effect on the total amount of revenue in a day. This mathematical equation is appealing to me as I have worked at Busch Gardens in Williamsburg, Virginia for four years and two of those years in a leadership position. As part of my position, I was privy to some financial information about my department. I would like to see how other departments and their operations contribute to the overall daily revenue of the park as a whole.

The number of variables that could affect the revenue of a theme park could be infinite; however, there are several that I would want to include in my equation. The number one variable would be attendance. Attendance considers other variables including the weather and the time period of the season. I assume that a day with high attendance would have a higher daily revenue than a day with lower attendance, making the relationship between daily total revenue and attendance a direct relationship. The units for attendance would be total people in the park for the day and the total daily revenue would be in dollars. Another variable that would be included in my equation would be the cost of admission into the park. During the season the cost of daily admission fluctuates depending on the projected number of guests at the park that day. The cost of daily admission would be measured in dollars. I believe that the cost of daily admission and total daily revenue of the park would have a direct relationship as one increases then the other would increase as well. During Howl-O-Scream, the cost of admission is higher and the total daily revenue is higher as well. The presence of food specials and special events regarding food will also have an impact on the revenue for the day. Food and Wine Festival is a large event in the park that does not have a higher daily admission cost. The event brings in revenue for food. The more food that is sold in a day would result in a higher daily revenue amount, meaning a direct relationship. Food sales would be measured in dollars. Merchandise is another area of the park that makes money daily. Merchandise includes the games and typical gift shops. The more merchandise is sold, the more money the park makes, representing a direct relationship. Merchandise sales would be measured in dollars. Another major factor of total daily revenue is the number of rides that exist at the park and are in operation. Theme parks that have more rides will make more money in a day than parks that do not have as many rides. This is another example of a direct relationship. However, some days not all of the rides are operational and is another factor that could affect the number of rides that exist at a park. From the perspective of a guest, if a ride is not operational for a day, then the ride does not exist and the total number of rides decreases for the park in the eyes of the guest. If a ride is not operational, then staffing is decreased. The number of rides would be measured in units of one, meaning each ride would represent one. When staffing is decreased the park’s expenses decrease and the revenue increases, representing an indirect relationship. Staffing would be represented by the number of people working in the park during the day. Other factors that would need to be considered are the cost of parking for a day and what the park’s target audience is for the day. Each of these would factor into the total revenue. Parking costs are associated with daily cost of admission in my equation. If the park’s target audience is adults, then more revenue will be made from the sale of alcohol. Whereas if the target audience is children, then more money would be made in merchandise through games and gift shops. The park appeals to different audiences through different events. The summer concert series features popular bands for children, whereas Howl-O-Scream is marketed towards adults due to the mature content. My equation would have a number of different variables, most of which would have a direct relationship with the total daily revenue of the park.

The equation showing how different aspects of the park affect the daily total revenue of a theme park would be useful to several different people in a variety of ways. Each department has a business analyst who compares data and determines what the park needs to do to make the most money. My equation would allow them to break apart different aspects of revenue with comparable units. Another use of the equation would be for current and possible investors see what their investments are funding and if the efforts being made are profitable. If my equation existed, then it would also make it easier to compare different parks with each other. My equation would be useful to various people in the theme park industry.

Overall, my equation would encompass a variety of factors that all contribute to the revenue of a theme park. My equation would specifically break revenue down into different categories and would focus on daily revenue, making it easily comparable throughout the year. The equation would be used by many different people and aid them in several ways. An equation that would break down various types of revenue would be an asset to many parks.