Exercise 1.6
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Question 2 - <mark>Type of Analysis</mark> highlighted in yellow

Question 3 - <mark>Form of variate analysis</mark> highlighted in green

Read the following scenarios.

- ○ **<u>Scenario 1:</u> GameCo's marketing team has noticed that puzzle game sales are down this year. The finance director wants a report on what's causing this drop in sales, so the marketing team reaches out to the analysts for help.** <mark>Diagnostic Anaylist-</mark> This type of Analyst digs into what happened in the past and what differed from the years prior for the sales to be down this year. This is how the company will figure out the most logical answer to the question at hand.

- ○ <mark>A Bivariant Anaylist</mark> would be used to determine why sales are down this year vs. last year. We might use a scatter plot to determine what variables were different, including weather, freight, shipping time, and cost vs retail, and sales. Some of these variables would be visually helpful to look at on a scatter plot to see if there was a major difference in one of these business areas that would alert that there was a business problem or strategy that cause the company to lose sales.

  <u>Scenario 2:</u> The sales team wants to know which games it should stock in each city in order to most effectively meet local customer demand. Shipping rates vary by location, and this difference will need to be reflected in which games are recommended for which locations.

- ○ <mark>Prescriptive Analyst</mark> - Because the company wants to make the most educated decision on what will happen during future selling months in certain geographical

locations. This analyst must be able to determine the most cost-effective way to stock certain games while keeping logistics and freight costs down.

- ○ <mark>Multivariate Analysis</mark> - would be the best method to determine what games should be stocked since this method examines multiple factors at the same time to determine the most effective outcome. For this example, the variables would include shipping rates, cost, and demographical information on how different games preform per area or store.

Scenario 3: A GameCo executive is due to give a presentation at an upcoming gaming conference, and they want to know how sales vary by month of the year.

- ○ <mark>Descriptive Analyst</mark> - Because we need a breakdown of past sales per month. Analysts must focus on customer spending habits in the past to create an overall summary of how month-to-month sales normally progress, how they differ, and how they did/or can improve.
- ○ <mark>Univariate Analysis</mark> would be used to determine the sales for each month in the past since we are analyzing how much money was spent during each month. So we would use a histogram to y axis as sales and the x would represent chronological months.

Scenario 4: The Olympic Games will take place in six months. GameCo's operations team wants to forecast how many sports games it will sell in the months before, during, and after the games so it can order the correct amount from the production facility.

- ○ <mark>Predictive Analyst -</mark> We need to know a combination of information involving descriptive and diagnostic data to forecast future sales. This analyst must be able to pinpoint high-traffic areas where they should put their additional money in order to sell more games in anticipation of the Olympic games as well as target high-traffic geographical locations in which these Sports games will sell the best in their stores.
- ○ <mark style="background-color:#00FF00">Multivariate Analysis</mark> would be used to determine business strategy while examining three different timeframes to determine sales before, during, and after the Olympic games. We can examine different variables such as weather, advertising spend, and geographical attendance for the games to forecast where and when products should be ordered and shipped to yield the highest profit for the company during these 3 timeframes.

Question 4. Write three questions for each scenario outlining what information you would need in order to get the analysis up and running. What would the answers to these questions let you do that you couldn't otherwise?

<mark>**Scenario 1:**</mark>

What is the Pricing Strategy for puzzle games this year vs. last year? This question would allow us to determine if we need to change pricing, why we changed pricing, or if we can eliminate this concern all together for being the reason why sales are down.

Was there different distribution and shipping different between this year and last year? This is another question to ask to answer the question to determine if this might be a reason why sales are down from last year. If shipping route and cost were more efficient than last year then that might be the reason for the drop of sales this year

Did the marketing strategy change from this year vs. last year? If so, what was it? Need to evaluate how efficient the marketing strategy and budget was for this year vs last year to determine how we can change it going forward to attract more customers.

Was there less competition for these puzzle games last year vs. this year? More competition in the market means that there are more competition in sales. The more saturated the market is the less sales the company will be able to make.

<mark>Scenario 2:</mark>

Look at past sales to see which games will suit the best demographic - who is the customer base in each location? This answer type of games the company will be stocked at which location to suit the needs and wants of the customer base in each area.

How much time and how much money is it going to cost to get the product from the warehouse to each store? Determine when to place orders, how much they are going to buy, when games need to be in stock at the location to maximize profit, and will help negotiate terms with 3rd parties that are associated with the wholesale process.

What are the economic statistics in each area? Has is changed in the past? Are some places becoming more or less populated? This will help us determine how much our consumers are willing to spend on games and will help the company to determine price points.

How effective are marketing strategies in each area? Has print or digital marketing worked in the past to grow sales? These questions will determine where the marketing budget will go and how it will be distributed between each area. Higher population in areas where games will be stock will probably get a higher percentage of budget vs. rural areas with fewer customers.

What are the historical sales? - Analyze each month in the last few years to determine trends among games each year

Are some of these factors due to holidays or events around certain games? Are there certain Conventions that take place during the year when we see sales increase? Questions like these help explain why profit is higher than other months.

Are there times during the year when sales are lower than others? Such as the holiday season or the beginning of the school year around September when schools go back into session. Do our consumers have less time or money to spend on games? These questions will further help the company determine and collaborate with the internal sales team how the company can boost sales during the slower months historically.

What games at the Olympics are most watched by our consumers? This question gives us the opportunity to promote sports games our consumers is most likely to buy.

What players or athletes are the most popular among our consumer group? This answer will give us the insight to collaborate with our consumers' most-watched Olympic players and incorporate them into a new game, marketing promotions, or sponsorships for the Olympic games.

When should products arrive at each retailer to maximize sell-through? The answer to this question determines when product needs to be so that they can arrive at their proper retail to

maximize sell-through and profit. If the product arrives too early or too late, this poses the risk of losing sales or marketing down stale product.