Does the price of a golf ball affect the distance traveled?

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In my science fair project, I will find out if the price of a golf ball affects the distance it travels. The problem is that golfers don't know what is the best brand of golf ball to use. The hypothesis is if the price of a golf ball increases, then the distance it travels will also increase when hit with the same force.

Method

The following method explains how the experiment was organized including the materials and step by step procedures of how to conduct this experiment. My question is does the price of a golf ball affect the distance it travels. My hypothesis is if the price of a golf ball increases, then the distance it travels will also increase when hit with the same force because I believe that the more they cost the better the efficiency with the bounce and roll.

Materials

This section outlines the specific materials and equipment used to carry out the experiment and gather reliable results. The materials used to conduct this experiment are listed below. The first material I use is multiple packs of

different golf balls Priced at 1-4 dollars a ball. Next, I use a Callaway seven iron and driver golf club to hit the different golf balls. Then, there is the range finder used to calculate the distance traveled by each golf ball. Last I use a pencil and note pad are used to record data and results of each hit

Procedures

This section outlines the specific procedures used to carry out this experiment and gather reliable results. First I found a flat outdoor field that was open so that the golf balls could travel without obstacles. Then I gathered a measuring tape, golf clubs, a range finder, four types of golf balls ($1, $2,$3,$4), paper and a pencil. Next I made a starting point that was marked on the dirt using a flag. I had a range finder that was placed on the golf bag so I would have easy access to reach it and measure the distance of each ball. The first golf ball ($1 ball) was placed on the start point. The ball was hit once, and the distance from the starting point to where the ball stopped was measured in yards. The distance was recorded on the data sheet. Step 4 was repeated nine more times with the $1 golf ball so in the end there were 10 trials. The same procedure was followed for the $2, $3, and $4 golf balls. Each type of ball was

hit 10 times, and every distance was measured and recorded. After all trials were completed, the distances of each type of ball were added together and averaged to find the mean distance for each price level. The averages were compared to determine whether the price of a golf ball affected how far it traveled.

Conclusion

The results of this experiment showed that the price of a golf ball did have an effect on the distance it traveled.Overall the higher price tended to travel farther than the lower price golf balls. The $4 golf ball had the greatest average distance while the one dollar golf ball had the shortest average distance. The two and three dollar golf balls traveled distances in between these two, me a gradual increase at the price increase.

Results

These results support the hypothesis that more expensive golf balls would travel farther. This may be because higher price golf balls are made with better materials and designs that allow them to apply further when hit with the same

amount of force. However, the distances were not extremely large which suggest that price is not the only factor that affects distance. In conclusion, the experiment suggests that paying more for golf balls can improve performance but skill, swing strength, and weather conditions may also play important roles.

The purpose of this experiment was to determine whether the price of a golf ball affected the distance it traveled. Four golf balls with different prices ($1,$2,$3, and $4) were each hit 10 times using the same golf club and the same swing. The distance of each hit was measured in yards and recorded on the notebook.

The purpose of this experiment was to determine whether the price of a golf ball affects the distance it travels. The results supported the hypothesis that higher-priced golf balls would travel farther than lower-priced ones. The $2 Taylor Made Speed Soft had the shortest average distance, the $3 Mizuno TB Tour traveled farther, and the $4 Taylor Made TP5 Stripe produced the greatest average distance. This pattern shows a positive relationship between golf ball price and distance.

One explanation for these results is the difference in construction among the golf balls tested. The Taylor Made TP5 Stripe is a five-layer tour ball designed for greater compression and energy transfer, while the Mizuno TB Tour is a multi-layer performance ball, and the Speed Soft is designed primarily for feel rather than maximum distance.

Research on golf ball design has found that balls with multiple layers and advanced core materials produce higher ball speed and more efficient flight, which can increase overall distance (Cross & Nathan, 2017). This supports the idea that the more expensive TP5 Stripe traveled farther because it is engineered with higher-quality materials and aerodynamic features.

Although the hypothesis was supported, there were limitations in this experiment. The golf balls were hit by a human golfer rather than a mechanical launcher, so differences in swing speed, contact point, and launch angle may have affected the distances. Weather conditions such as small changes in wind could also have influenced the flight of the ball. In addition, only one model was tested at each price level, so the results may reflect differences between brands rather than price alone.

Future research could improve this study by using a golf ball launcher to keep swing speed constant for every trial. Testing several brands within the $2, $3, and $4 price ranges would help determine whether price or brand has the greater effect on distance. Another useful study would be to test accuracy and spin rate in addition to distance to see how price influences overall performance.

Overall, this experiment demonstrated that golf ball price can affect how far the ball travels. The findings suggest that the higher-priced Taylor Made TP5 Stripe provided better distance performance than the Mizuno TB Tour and the Taylor Made Speed Soft, which may be helpful information for golfers deciding which ball to purchase.

Discussion

The purpose of this discussion is to compare the results of this experiment with findings from similar scientific studies and to explain what the results suggest about the relationship between the independent and dependent variables. An unknown middle school student did a project that determined if more expensive golf balls translate to better results on the golf course.
The results/ outcome is unknown. (Kimberly Hutmacher, 2026)

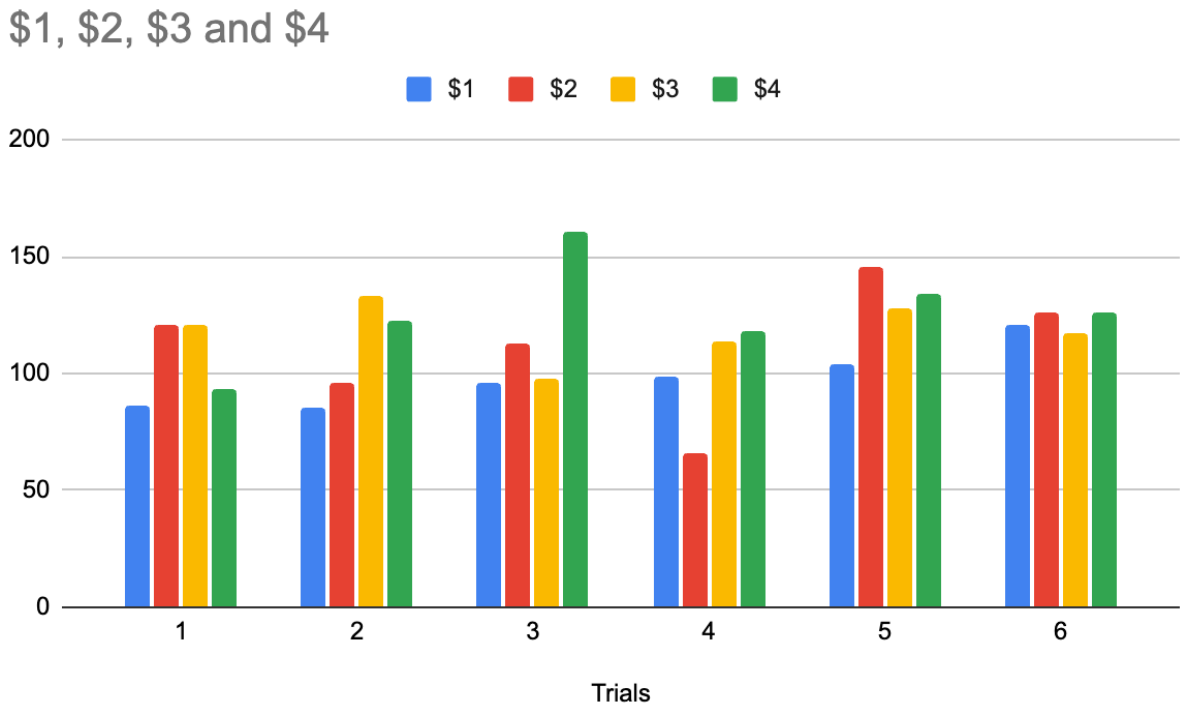
Another project I researched was, what is the relationship between club loft angle and the distance that the ball travels when struck. A man named Goodstein, M., 1999 conducted this project. The results of this experiment are also unknown. (Goodstein, M., 1999)

In my experiment I used 4 different types of golf balls. Modern golf balls must weigh no more thanQQ 1.620 ounces (45.93 g), have a diameter of at least 1.680 inches (42.67 mm), and conform to strict symmetry rules. They feature 300-500 dimples—roughly 336 on average—to reduce drag and increase lift. The elements of a ball's design and construction have a profound impact on its overall performance on the course. Another fact is they are made of layers,

including an inner core made from pressurized rubber or synthetic rubber, surrounded by one or several outer layers, and a characteristically dimpled cover. Their construction increases the ball's spin that lends itself to greater control, especially in the short game.

Conclusion and future study

The results of this investigation supported the hypothesis, showing that the data followed the expected pattern predicted before the experiment began. The price of a golf ball did have an effect on the distance it traveled. The results of this experiment showed that the price of a golf ball did have an effect on the distance it traveled. Overall the higher price tended to travel farther than the lower price golf balls. I learned that higher priced golf balls were better because they are made with better materials. If I were to do this experiment again I would change the height of the tee and the clubs I used. In conclusion my experiment was successful because my results proved my hypothesis was correct.


$1, $2, $3 and $4
$1
$2
$3
$4
200
150
100
50
0
1
2
3
4
5
6
Trials

References

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