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Physics

Does Golf Ball Density Affect the Distance a Golf Ball Travels?

The purpose of this experiment was to determine if a golf ball's density would affect the distance that a golf ball can travel. The hypothesis is that if a golfer was to hit a golf ball with a harder density, the ball would travel farther with less spin. But if a golfer was to hit a golf ball with a softer density, the ball would not travel as far but it would produce more spin.

To conduct this experiment, three different types of Titleist golf balls were purchased (soft, medium, and hard density). The three golf ball types that were purchased were the Titleist Tour Sof t(soft density), Titleist ProV1(medium density), and the Titleist Velocity (hard density). The different densities of the golf balls were the independent variable. The dependent variable was how far the golf balls traveled due to the different densities. Another important variable was that contact made on a shot may have varied the result of the shot. Then one trial was conducted in which the same golfer then hit 15 shots with each of the three types of golf balls. All of the measurements were recorded on TrackMan (a golf simulator). Then the data was recorded after each individual shots.

It was concluded that the hypothesis was wrong because the Titleist Tour Soft (the softest ball) averaged the farthest distance. The Titleist Tour Soft averaged 187.5 meters. The Titleist ProV1 averaged 183.6 meters. And lastly, The Titleist Velocity averaged 183.7 meters.