

Nerds and Billiards

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Practical Applications in Advanced Mathematics

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Abstract

Billiards has been played since the fifteenth century. It has evolved greatly since its inception and is now a popular game among people. The equipment used for billiards has also evolved along with it, being developed quickly because of the Industrial Revolution. Billiards has had a long history. In the United States, billiards almost disappeared twice, but thanks to Hollywood it became a popular game again. Now billiards is a high stake game based on physics and geometry, and whoever can master those techniques can master the game. My experiment was to prove how geometry can help in the game of pool. I tested two different theories, the ninety degree rule and the angle of incidence for a bank shot. David Alciatore states that when the cue ball hits an object ball at any cut angle with no top or bottom spin, the balls will part at a ninety degree angle. After many tests, I was able to prove that Alciatore was correct in his statement. The other test was the bank shot. The angle of incidence rule states that the angle of incidence is equal to the angle of deflection. I set tape on the pool table to show that the angles in the two triangles were congruent. The angle of incidence rule proved to be correct also. My experiment proved that geometry was applicable to billiards and can help a player win the game.