



CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

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| Name(s) Andrew M. Shaheen | Project Number J1419 |
| Project Title The Geometry of Banking a Basket | |
| <div><div>Objectives/Goals Have you ever wondered where the best spot to shoot a bank-shot on a Basketball court is? In my experiment, I hypothesized that if I used Algebra and Geometry to find the relative probability of making a bank-shot from different positions on a basketball court and then make a scale model of a basket and backboard to find the relative probability to physically test the bank-shot, then I would be able to predict the best position on the basketball court for a real player to make a bank-shot.</div><div>Abstract I first used math and geometry to find different lengths on the court such as backboard length and length from the backboard to the player the apostrophe s position. I then used these lengths to find the relative probability from the 30, 45, 60, and 90 degree positions. I then built a scale model using poster boards for the court, a wrapping paper tube for a ramp and a miniature basketball and tested it from the 0, 30, 60, and 90 degree positions. The data was used to find the relative probability from each position.</div><div>Methods/Materials I first used math and geometry to find different lengths on the court such as backboard length and length from the backboard to the player the apostrophe s position. I then used these lengths to find the relative probability from the 30, 45, 60, and 90 degree positions. I then built a scale model using poster boards for the court, a wrapping paper tube for a ramp and a miniature basketball and tested it from the 0, 30, 60, and 90 degree positions. The data was used to find the relative probability from each position.</div><div>Results For my calculations, the highest relative probability was at the 90 degree position. For my scale model, the 30 degree position had the highest relative probability of 3.03.</div><div>Conclusions/Discussion I was able to find the relative probability of making a bank-shot with Math and Geometry and by using a scale model. This project can help basketball players to know where the best position to shoot a bank-shot on the court is.</div></div> | |
| Summary Statement My project is about using geometry to find the best position on a basketball court to shoot a bank-shot. | |
| Help Received My dad taught me to use excel spreadsheets | |