



Curiosity Guide #610

Bowling Science

Accompanies Curious Crew, Season 6, Episode 10 (#610)

Speedy Bowling Ball

Investigation #7

Description

How fast does a bowling ball go down that lane?

Materials

- Stopwatch
- Bowling ball
- Bowling lane
- Calculator
- Whiteboard
- Marker
- Eraser
- A friend

Procedure

- 1) Ask a friend to bowl three times.
- 2) Use a stopwatch to time how long the ball takes to travel from the foul line to the pins.
- 3) Repeat two more times, recording the times of each.
- 4) Add the three times together and divide by three to find the average speed.
- 5) Multiply the answer by 60 and then by 60 a second time.
- 6) Divide the answer by 5,280.
- 7) What was the average speed of the traveling bowling ball?

My Results

Explanation

Doing the experiment three times improves the consistency of the data. Adding the times together and dividing by three provides an average speed. The distance is 60 feet, 6 inches from the foul line to the head pin, and we can round down to 60 feet for an approximation.

Calculate Average Speed = Length divided by Time. Multiply the average speed by 60 to convert to feet per minute and then multiply by 60 a second time to convert to feet per hour. Divide that product by 5,280 to convert the speed to miles per hour. Keep in mind this is an average speed because the ball continually slows down from the point of release.

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