

A decorative graphic on the left side of the slide. It consists of a blue parallelogram and a light green parallelogram, both tilted at an angle. The blue shape is in the foreground, and the green shape is partially behind it. They are set against a dark blue background with subtle diagonal lines.

# How Long Will It Spin?

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# Question

Which US coin will spin for the longest?



# Materials

- Timer
- Dime
- Nickel
- Penny
- Quarter
- Pencil
- Paper
- Helper(to spin the coin)



# Procedure

1. Get your materials
2. Get the timer ready
3. Have your helper spin one of the coin
4. When it stops write down the time and repeat 5 times
5. Get a different coin and repeat steps 3 and 4 until you done all the coin
6. Take the longest and shortest time and get rid of them (because the helper might used too much force or too little)
7. Take the 3 times and calculate the average
8. Take the average and write a conclusion



# Prediction

I predict that the quarter will spin for the longest because it is not too heavy and also not too light and it is pretty big. So I think that the quarter will spin for the longest than the other coins.



# Variables

Changed/Manipulated

- The coin being spun

Measured/Responding

- The amount of time the coin spun around

Controlled

- Same surface
- Same starting point
- Same person spinning the coins



# Data Table

Type of coin	1st Trial	2nd Trial	3rd Trial	Average
Penny	8.12sec	7.10sec	6.89sec	7.37sec
Nickel	9.33sec	8.46sec	8.16	8.65sec
Dime	6.82sec	7.18sec	6.32sec	6.773...sec
Quarter	8.38sec	7.93sec	8.25sec	8.18666667sec



# Conclusion

In conclusion my prediction was wrong the coin that spun the longest over 3 trials is the nickel. Looking at the data recorded over 3 trials the coin that spun the shortest was the dime which had an average of 6.773...sec while the nickel spun for an average of 8.65 sec. This data confirms that the nickel will spin for longest noting about a 1.88sec difference.





# Source of Error

- Because the floor had uneven areas that might have affected the coin
- Human error (spun each coin with different amount of force)
- Timing might be a little bit off