

# The luck of the dice?

Does the way I roll a dice affect how many times I get a 6?



# Problem

I like to play the game Trouble with my family.

I get frustrated because it takes me a long time to role a 6 with the pop-o-matic die to get my pegs out of ther home.

I started to wonder if it would be better for me to roll the die in a diferent way?

I even invented my own way to roll where the die rolls across the table and onto the floor.

If I can find out a way where I will roll more 6s I might be able to win more games of Trouble!

# Procedure

## Equipment

6-sided die

1 Cup

1 pop-o-matic die

Table

Pencil and paper

# Procedure

## Method

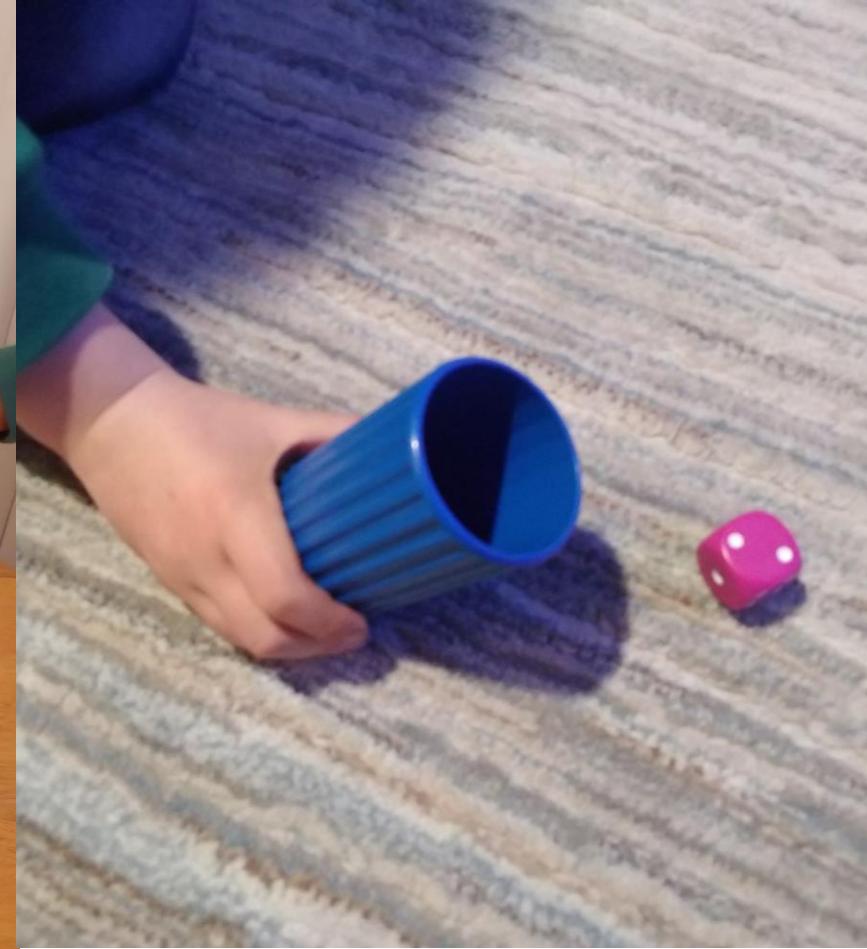
Roll a 6-sided die using a cup

Record result

Repeat 199 more times for a total of 200

Repeat experiment using 3 other dice rolling methods-

Rolling from my hand, pop-o-matic die, and rolling the die hard enough so it rolls across the table and onto the floor



**Let the rolling begin**

# Hypothesis

I invented a new way of rolling dice. I think my new way of rolling the die hard enough so it rolls across the table and onto the floor will give the most 6s because it has worked for me when I have been playing a game before.

I think the pop-o-matic will give the least number of 6s because it takes me a long time to get my pegs out when I play Trouble and I don't usually win.

# Results

## Trouble Pop-o-matic Die

Number rolled	Number of times rolled
1	38
2	29
3	36
4	36
5	34
6	27

# Results

## Hand Roll

Number on die	Number of times rolled
1	32
2	32
3	23
4	35
5	37
6	41

# Results

## Table to Floor

Number rolled	Number of times
1	30
2	36
3	34
4	29
5	36
6	35

# Results

## Using a Yahtzee Cup

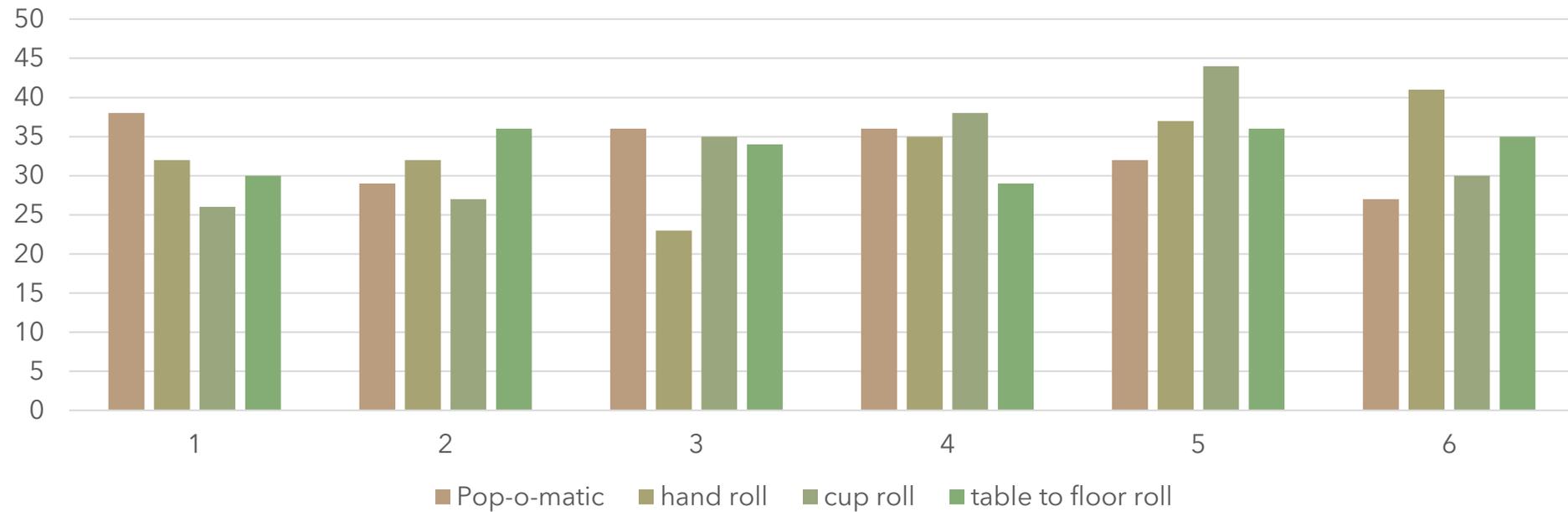
Number rolled	Number of times
1	26
2	27
3	35
4	38
5	44
6	30

# Results

<b>Number Rolled</b>	<b>Pop-o-matic</b>	<b>hand roll</b>	<b>cup roll</b>	<b>table to floor roll</b>
1	38	32	26	30
2	29	32	27	36
3	36	23	35	34
4	36	35	38	29
5	34	37	44	36
6	27	41	30	35

# Results

Chart to show how many times each number was rold for each way I rolled the dice



# Conclusions

My hypothesis was not right. The hand rolling was the best because it got the most 6s.

But I was right about the pop-o-matic. Because It got the least 6s only 27 out of 200. Maybe thats why I don't win when I play Truble.

Using different ways to role dice does give you diffrent numbers

The number rolled most often was 5.

The number rolled the least was 2.



# Next steps

I would like to use different size dice and try rolling 2 at once to see which is the best way to get the most 6s.

I would like to roll the dice even more times to see if this changes the number of times I roll 6.

Maybe I can ask my brother and Mom and Dad to help to see if they get different results to me

I would like to try this experiment at school because the desks there are shorter than my table at home and I think that might give me different results because the dice don't have so far to fall. Maybe I can try to use lots of different height tables and see what happens.

I wonder if I would get the same results again or if it really is down to the luck of the dice!

	cup roll	
1		26
2		27
3		35
4		38
5		44
6		30

# Lab note book

	table to floor	
1		30
2		36
3		34
4		29
5		36
6		35

# Lab note book

	POP - 0 - mdti	
1	 	38
2		29
3		36
4		36
5		34
6		27

# Lab note book

	hand roll	
1		32
2		32
3		23
4		35
5		37
6		41

# Lab note book