

# My 1st Politics Report

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## Objective of this report

I'm Takashi Tsuruta, who lives in Funabashi City, Japan. We are doing various activities to make science and technology familiar. I hope my efforts will be of any help to everyone.

In this report, I would like to tell you about the following.

1. Introduction
2. Taking familiar paints as an example
3. Think about one constituency
4. Conclusion

**Web page**

<https://neupro-25874.web.app>

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From smartphones, etc.



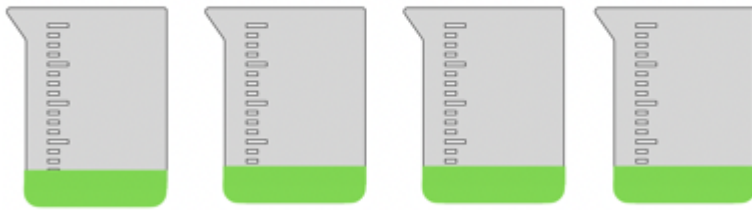
## 1. Introduction

After watching the tweets of "VOICE PROJECT: VOTING YOUR VOICE", This VOICE PROJECT's "Our society will change with votes gathering." But I would like to explain that the more the turnout rate actually goes up, the more effective it is. Of course, I have nothing to do with a certain political party either.

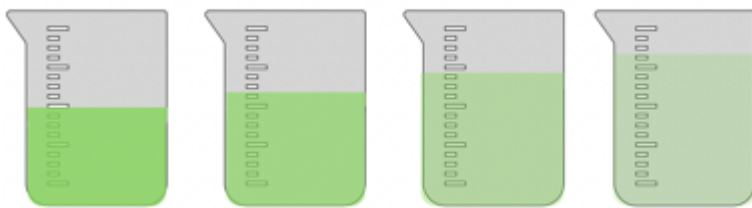
## 2. Taking familiar paints as an example

Prepare 200g of green dye. Dissolve this in four kinds of water (300g, 400g, 500g, 600g). Then, the amount of these two aqueous solutions will be 500g, 600g, 700g and 800g respectively.

An aqueous solution is the liquid in which the substance dissolved in water. Here, the substance is a dye.



**Put 200g of green dye in the beaker**



**Next, put four kinds of water (300g, 400g, 500g, 600g) in each beaker**

As a simple image, I've diagramed the state of each aqueous solution. If you look at this figure, 500g is the thickest, and as the amount of aqueous solution increases, it becomes thinner, and 800g becomes the thinnest. This is an example of the concentration of green dyes, but it can be said that it represents the presence in the water of the green dye.

Concentration is simply a percentage.

### 3. Think about one constituency

Suppose one representative can go to the Diet in a constituency. Suppose there are 1000 voters in the constituency. The representative is the one who got the most votes in the constituency.

Voters are people who have the right to vote.

Let's think about the number of votes (absolute number of votes) to be absolutely elected here. That's the majority of the total number of votes in the constituency. If there is a candidate to achieve it, only one of them will appear. In that sense, I called it "absolute". Of course, if there are many candidates and the votes are distributed, the majority of the total number of votes is unrealized. Then, I'll think about it specifically.

Consider if one candidate A has many supporters (200 people).

For example, if the turnout is 50%, 50% of 1000 people (500 people) will go to vote. Suppose candidate A's supporters (200 people) must vote. Then only 300 people left will vote. In this case, candidate A is 51 votes up to the absolute number of votes. Because it's already 200 votes

for supporters, and the absolute number of votes will be 251 that is the majority of 500 votes in this case. In other words, if 51 out of the remaining 300 people vote for candidate A, so candidate A will be a representative of this constituency. If not, there is no doubt that candidate A is literally in a favorable state. Candidate A has already obtained a total number of votes of 40% from supporters (200). 40% is from  $200/500$  people. Even if candidate A does not reach the absolute election, if no other candidate with a cohesive vote exceeding the number of votes of candidate A's supporter among the remaining 300 people does not appear, candidate A will be elected. As an image, this is considered to be the case of 500g of the aqueous solution earlier. Green dye is a supporter of candidate A. You can see that the presence in the water of the green dye is large. So, in the image, I thought about 300g of water, but what will happen to the color in the end if the red dye is mixed with 200g? It should be brown. There is no presence in the water of green dye. However, it's hard to put out a 200g of cohesive color in 300g.

If the next turnout is 70%, 70% of 1000 people will be 700. Suppose you are also a candidate A supporter (200 people) to vote. Then, the remaining 500 people will go to vote. In this case, candidate A is 151 votes up to the absolute number of votes. The calculation is because the absolute number of votes is the majority of 700 that is 351. In other words, if 151 of the remaining 500 people vote for candidate A, the election is certain. I think you can see that candidate A is not advantageous compared to the above example. In addition, candidate A is obtained from about 28.6% of the total number of votes from supporters (200 people). About 28.6% is from  $200/700$  people. Also, even if candidate A does not reach the absolute election, if no other candidate with a group of votes exceeding the number of votes of candidate A supporters of the remaining 500, candidate A will be elected. However, other candidates also have a chance than the example above. In other words, you won't know who is elected if you collect about 40% of the votes of the remaining 500 people. 40% is from  $200/500$  people. This is considered to be the case of 700g of the aqueous solution earlier. As the green color is diluted, it is easier to dye to other colors.

## 4. Conclusion

As I've explained so far, if the turnout goes up, even candidates with many supporters will not be easy to win. I think this will lead to each representative to be more aware of each constituency. The constant high turnout should be an opportunity for Japan to improve politics.

**Keywords:** *aqueous solution, concentration, voter, turnout*