

When making decisions about how to convert the collective will of the people into a singular choice, it makes sense to know as much about the people’s preferences as possible. One way to do that is to use an **ordinal electoral system**, also known as **ranked choice voting**. The ballots in an ordinal system have voters list their top choice and rank all the possible second, third, etc choices below them.

Suppose we expanded our snack election to the larger school and we received 100 ballots. It would be quite difficult to look at each individual ballot, so we often collect them into a **voting profile**. Here’s what one might look like below:

Rank	100 Voters				
	31	20	19	16	14
#1	Apples	Bagels	Doritos	Edamame	Cookies
#2	Doritos	Doritos	Cookies	Cookies	Edamame
#3	Cookies	Cookies	Edamame	Bagels	Doritos
#4	Edamame	Edamame	Bagels	Apples	Bagels
#5	Bagels	Apples	Apples	Doritos	Apples

1. Explain what this chart is telling you.
2. Your first **major** challenge is thus: Can you come up with five different voting systems, each of which sounds like a reasonable way to count votes, such that each of the five candidates is a winner? (If you get stuck, turn the page to get another point of view.)

3. Sometimes it is helpful to look at a voting profile in another way - rather than looking at how groups of voters voted, we can look at it from the candidates point of view and see how many different ballots they earned. Fill out the table below based on the voting profile on the previous page. (Each row should sum to 100.)

Candidates	Rank				
	1st	2nd	3rd	4th	5th
Apples					
Bagels					
Cookies					
Doritos					
Edamame					

Does this chart help you come up with other voting systems? Use the space below to do more calculations and see what you come up with.