

Support skills for Lesson 1 Part C

In the next class, you will need to be able to read voting results presented in a table and calculate percentages.

Plurality vs. Majority

In some approaches to making decisions, it is important to determine if over half of a group holds a certain preference. Decisions that require at least half of the vote to win are said to require an absolute **majority**, while decisions where the option earning the most votes wins (even if that amount is less than half) are said to require a **plurality**.

- 1) Suppose you and your classmates are deciding what type of food to eat at the class party. You have each given your top choice in the table below.



Credit: Milkos/iStock/Thinkstock

Type of Food	Number of Votes
Tacos	6
Spaghetti	2
Hamburgers	11
Pizza	12
Sushi	5

Part A: How many people are in your class if each student voted?

Part B: Which food will be served at the party if the decision is based on a plurality model?

Part C: What percentage of your class voted for pizza? Round your answer to the nearest tenth of a percent.

Part D: Is there a food choice that received the majority of the votes?

Part E: Since there is no absolute majority, how do you think the food choice for the party should be made?

Percentages and Unit Rates

In In-Class Activity 1C, you will determine the total number of voters in an election from the percentage of voters who voted a certain way. To do this, a common strategy is to determine the *unit rate* of how many voters make up 1% of the total population and then multiply by 100 to compute the number of voters in 100% of the population.

- 2) Suppose there was a vote at a local school to determine a new school logo. You are told 7% of the students wanted to keep the old logo, and that 7% represents 1,400 students at the school. We want to determine the total number of students at the school.

Part A: Write a rate showing the number of students that make up 7% of the total number of students at the school.

Part B: Simplify the rate from Part A so that it is a unit rate. Write a complete sentence describing how the unit rate relates to the population of the school.

Part C: Use the unit rate to determine the total number of students at the school.

- 3) Determine the total number of people in each of the following situations. The first row has been done for you.

Rate	Unit Rate	Total Number
$\frac{180 \text{ people}}{90\%}$	$\frac{2 \text{ people}}{1\%}$	200 total people
$\frac{300 \text{ people}}{15\%}$		
$\frac{20 \text{ people}}{2\%}$		
$\frac{105,000 \text{ people}}{70\%}$		

Practice

- 4) For each of the following problems, select all of the combinations of percentages that add up to over 50%.

Part A: 30%, 45%, 7%

Part B: 15%, 12%, 13%, 14%

- 5) Circle three vote counts that together make up over half of the total votes.

5 votes, 6 votes, 7 votes, 12 votes, 5 votes

