

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**.



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- 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.

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

