

Planning the Ultimate Graduation Party with Inequalities

Congratulations! The producers of the Ultimate Graduation Party have selected you to plan your **dream** graduation party. Now that you have received your funds, it is time to get to work! You will need to carefully plan the guest list, venue, food, entertainment, and decorations for your party - while staying within your budget.

The producers of the Ultimate Graduation Party have the connections to book any venue and entertainment in the United States, so be creative and plan a unique graduation party that is television worthy!

1. The Team

Who is planning The Ultimate Graduation Party? Introduce the members of your team below.

1. _____
2. _____
3. _____

2. Budget

- Let B represent your total budget. Write an inequality representing your budget:

- The producers of The Ultimate Graduation Party are going to offer you a bonus if you stay within \$100 of your budget. Write and solve an absolute value inequality to represent this budget constraint:

3. Guest List

Decide on the number of guests you want to invite.

- Let G represent the number of guests. Write an inequality representing the maximum amount of guests you plan to invite:
- According to party planning experts, at least 75% of invited guests actually attend the party. Assume this will hold true for your party. Create a compound inequality to represent the minimum and maximum number of guests that could attend your graduation party:

4. Venue Selection

Research different venues and their costs. Remember, the producers can book any venue in the United States, as long as the rate for the venue fits your budget. List 3 possible options for your venue. Circle your final choice.

1. _____
2. _____
3. _____

Total Venue Cost for One Day: _____

5. Menu Planning

Ultimate Catering Company is the official caterer of all Ultimate Graduation Parties. They offer two dinner options from which guests can choose: chicken or steak. The chicken is \$14 per plate and the steak is \$18 per plate.

- What is the minimum amount you could spend on dinner if the minimum number of guests attend? (Refer to part 3)
- What is the maximum amount of money you could spend on dinner?
- Write a compound inequality representing the amount of money you will spend on dinner for your guests:

6. Entertainment

The producers of the Ultimate Graduation Party want to air THE most exciting graduation party yet. To do that, they need you to select entertainment for your guests and the audience.

- To ensure you have enough funds for the rest of your party, the cost of your entertainment must be no more than \$1000. Write an inequality to represent this constraint:
- Research and list 2 possible performers/groups to entertain your guests. Circle your final choice.
 1. _____
 2. _____

Total Cost for Entertainment: _____

7. Decorations

The party planning committee at the Ultimate Graduation Party will decorate your venue for you. The prices of the decorations they can purchase are listed below.

- Tablecloths: \$16
- String lights: \$12
- Welcome Sign: \$30
- Balloons: \$2
- Ceiling Drape: \$50

Your combination of decorations must cost no more than \$500. Write an inequality to represent this constraint:

Choose a combination of decorations that fit this budget. Show your work below.

8. Expenses

- Write a compound inequality for the minimum and maximum total expenses for the Ultimate Graduation Party. Include the cost of the venue, dinner, entertainment, and decorations.
- Did you stay within your budget?

9. Presentation

Congratulations, your party is planned! You are ready to pitch your ideas to the producers of the Ultimate Graduation Party. Prepare a presentation to showcase your party plan. Include the following components:

- Your budget and how you plan to allocate funds.
- The guest list with your compound inequality
- The venue and its cost
- The compound inequality for cost of dinner
- The entertainment and its cost
- Your decorations and their cost
- Your total expenses

In your presentation, reflect on how using inequalities helped you make decisions.

Evaluation

Your presentation will be graded according to the following rubric:

Criteria	Exceeds Expectations (3)	Meets Expectations (2)	Needs Improvement (1)
Clarity and Organization	Presentation is exceptionally clear, well-structured, and easy to follow. All required information (budget, guest list, venue, dinner, entertainment, decorations, & total expenses) is included.	Presentation is mostly clear and organized. Some required information (budget, guest list, venue, dinner, entertainment, decorations, & total expenses) is included.	Presentation lacks clarity and organization, making it difficult to follow. Required information is missing or unclear.
Accuracy of Inequalities	All inequalities used are accurate and demonstrate a thorough understanding of the concepts. Explanations of how the inequalities were used in decision-making are insightful.	Most inequalities used are accurate, and there is a general understanding of the concepts. Explanations of how the inequalities were used are satisfactory.	Inequalities used are inaccurate, and there is a lack of understanding of the concepts. Explanations of how the inequalities were used are missing or unclear.

Creativity	Presentation showcases a highly creative and innovative party plan, with unique elements and pictures.	Presentation includes some creative and engaging elements in the party plan.	Presentation lacks creativity and pictures.
Teamwork and Collaboration	All team members actively contributed to the project, and there is clear evidence of effective collaboration throughout the process.	Most team members contributed to the project, and there is some evidence of collaboration.	Team members did not work well together, and there is little to no evidence of collaboration.