## Planning a Vacation

1. You are planning a vacation. Start by deciding:
a. Who is going on this trip?
b. What type of vacation are you taking?
c. What is your budget?
2. Make a detailed plan outlining the logistics and all expenses for the vacation.
3. Now, analyze your plan. Categorize the different expenses of your trip.
a. What percentage of your budget are you spending on different categories?
b. Which of the costs are one-time costs and which costs depend on the length of the vacation, or on the number of people going on vacation?
c. Describe how the total cost changes if you change the length of the trip or the number of people.
4. Prepare a presentation about your vacation. Include a visual display that would help somebody who wants to take a similar vacation on a different budget decide how long their vacation could be.

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You are planning a vacation for a family of 4 . Your budget for the trip is $\$ 3,500$. This must cover:

- transportation
- lodging (like hotels or camp sites)
- food
- entertainment

1. Make a detailed plan with the activities and expenses for the trip.
2. Now, analyze your vacation. Categorize the different expenses of your trip.
a. What percentage of your budget are you spending on different categories?
b. Which of the costs are one-time costs and which costs depend on the length of the vacation?
c. What other quantities could be considered variables?
d. Describe how the total cost changes if you increase the length of the trip.
3. Prepare a presentation about your trip and all expenses. Include what percentages of the total budget are spent in the different categories. Describe mathematically how the cost of the vacation changes if you increase the length of the trip.
