



Additional Practice 13-4 Reasoning

Another Look!

There are 37 cars parked in the school parking lot at 5:00. There are 9 more cars at 5:30. At 6:00, there are twice as many cars as at 5:30. How many cars are in the lot at 6:00?

Use expressions to represent the quantities and relationships in the problem. You can use diagrams to help.

37 cars at 5:00 **9 more at 5:30**



37



$37 + 9$

Twice as many at 6:00



$(37 + 9) \times 2$

$$(37 + 9) \times 2 = 46 \times 2 = 92$$

So, there are 92 cars at 6:00.

Reasoning can help you understand how the quantities in a problem are related.



Reasoning

Ms. Lang lives in St. Paul, Minnesota. Last year, she made 4 round trips to Madison, Wisconsin, and 3 round trips to Bismarck, North Dakota. How many more miles did she travel in her trips to Bismarck than in her trips to Madison?



- Write an expression to represent the difference between the total number of miles in the Bismarck trips and the total number of miles in the Madison trips. You can use a diagram to help.
- Explain how the numbers, symbols, and operations in your expression represent the problem.
- How many more miles did Mrs. Lang travel in her trips to Bismarck than in her trips to Madison? Explain how you solved the problem.



Performance Task

Camping Trip

Ross is planning a camping trip for 136 scouts. He has reserved 4 buses. The scouts will sleep in tents or cabins. If they fill every bed in the cabins, how many campers will sleep in tents?



4. **Make Sense and Persevere** What information in the problem do you need?

5. **Reasoning** Describe the calculations needed to solve the problem and explain the order in which you need to do them. You can use a diagram to help.

6. **Model with Math** Write an expression to represent the number of campers that will sleep in tents.

7. **Critique Reasoning** Ross says he does not need grouping symbols in the expression that represents this problem. Is he correct? Explain.

8. **Be Precise** Find the number of campers that will sleep in tents. Explain how you found the answer.

