Problem-Solving Application: Use a Graph

1. This graph shows how much it costs for a dog to stay at the Doggie Hotel kennel for several days. What would it cost the Lennox family if their dog stays at the Doggie Hotel for a week?

**UNDERSTAND**

What is the question?

What do you know?

**PLAN**

Do you see a pattern?

Let \( x \) represent the number of days and \( y \) represent the total cost in dollars. What is the function shown in the graph?

**SOLVE**

Extend the graph. How much would it cost to kennel the dog for 5 days? 6 days? 7 days?

**LOOK BACK**

How can you check that your answer is reasonable?

Use a graph to help solve the following problem.

2. Six months from now, the Lennox family is planning a 2-week vacation. Canine Quarters offers a 2-week rate of $500. Is this a better deal than Doggie Hotel? Explain your answer.