

The map above gives the distances, in miles, between various locations in a state park. Traveling the shortest possible total distance along the paths shown on the map, from the visitor center Teresa visits the cave, waterfall, and monument, but not necessarily in that order, and then returns to the visitor center. If she does not retrace her steps along any path and the total distance that Teresa travels is 14.7 miles, what is the distance between the cave and the monument?

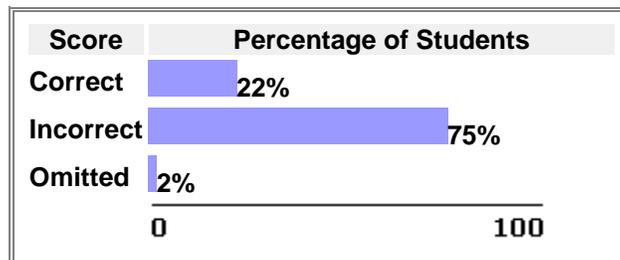
- A) 2.2 miles
- B) 2.5 miles
- C) 2.7 miles
- D) 3.0 miles
- E) 3.2 miles

## Key

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### 2005 National Performance Results



Note:

- These results are for public and nonpublic school students.
- Percentages may not add to 100 due to rounding.

**Mathematical Content Area:** *Number properties and operations* (Sub content classification: )  
**Mathematical Complexity:** *Moderate Complexity*

## Mathematical Content Area

### *Number properties and operations*

This content area focuses on students' abilities to represent numbers, order numbers, compute with numbers, make estimates appropriate to given situations, use ratios and proportional reasoning, and apply number properties and operations to solve real-world and mathematical problems. This content area also addresses number sense—comfort in dealing with numbers—and addresses students' understanding of what numbers tell us, of equivalent ways to represent numbers, and of the use of numbers to represent attributes of real-world objects and quantities. At grade 4, the focus is on whole numbers and fractions; at grade 8, the focus extends to include rational numbers; and at grade 12, the focus extends to include real numbers.

## Mathematical Complexity

### *Moderate Complexity*

Items in the moderate-complexity category involve more flexibility of thinking and choice among alternatives than do those in the low-complexity category. They require a response that goes beyond the habitual, is not specified, and ordinarily has more than a single step. The student is expected to decide what to do, using informal methods of reasoning and problem-solving strategies, and to bring together skill and knowledge from various domains.

Description	Grade	Type	Difficulty
Determine distance between points from a written description	8th	Multiple Choice	Hard