

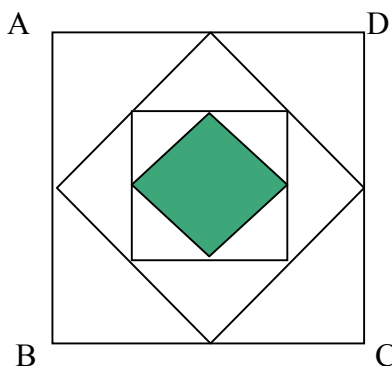
# Probability- Gen 117

## Oregon and New Jersey Department of Education Prompts

Solve each problem and show all of your work.

An auditorium has eight doors. Show how many ways it is possible for Kent to enter by one door and leave by another. Explain your thinking at each step and your answer(s).

Each smaller square is made by joining the midpoints of the sides of the larger surrounding square. What percent of the area of square ABCD is the shaded square?



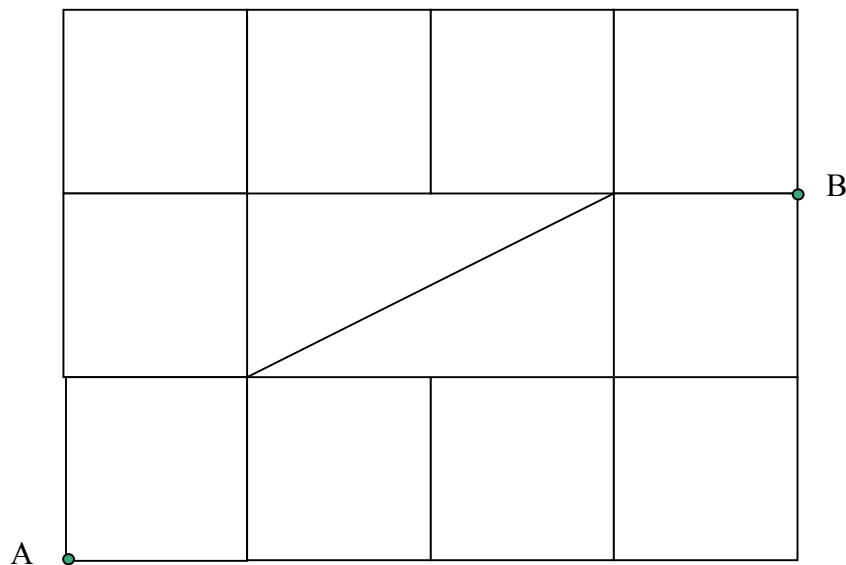
Explain your thinking at each step and your answer(s).

For a sale, a shopkeeper lowered the original price of an item by 30%. After the sale, the shopkeeper told his clerk, Mike, to raise the price of that item by 30% of its sale price. So Mike marked the item with the original price.

Was Mike right or wrong in doing that? Present a convincing argument to support your answer. You may wish to include a simple, specific example as part of your argument.

A section of a map showing city streets is provided below.

SCALE: 1 inch = 40 yards



Assume there are no one-way streets on this map. What is the approximate length in yards of the shortest route a person can take in driving along the streets shown from point A to point B? You may use a ruler to help you answer this question.