SHIKAKU

These puzzles originated in Japan and are known as Shikaku ("four corners" or "divide by box"). In the United States, they have been published as Partitions puzzles.

Below is a picture of a starting puzzle grid and its solution.

Before you learn about the rules for playing Shikaku, look at Puzzle A and its solution. What do you think is the goal in solving a Shikaku puzzle and what are some of the rules for deciding how to find the solution? Work with a partner and write down your observations and your ideas about the goal and the rules for Shikaku puzzles.

[Shikaku Puzzle A and its solution]
As you may have figured out, the goal in a Shikaku puzzle is to subdivide the grid into rectangles (and squares) so that the number in each rectangle refers to the area of that rectangle. Some additional rules:

- Only one number can appear in each rectangle
- Each square on the grid is used in exactly one rectangle (no rectangles may overlap)

Keeping this goal in mind and following these rules, there is exactly one unique solution for each Shikaku puzzle. You must determine the unique solution using logic.

Work with a partner on these Shikaku puzzles. Below the puzzles, write down some of your solving strategies.

Shikaku Puzzle B

Shikaku Puzzle C

Solving strategies:
**Shikaku**

The goal is to subdivide the grid into rectangles (and squares) so that the number in each rectangle refers to the area of that rectangle. Some additional rules:

- Only one number can appear in each rectangle
- Each square on the grid is used in exactly one rectangle (no rectangles may overlap)
Describe four different strategies you used to solve some of these Shikaku puzzles:
BONUS

Below are four additional Shikaku Puzzles. Solve them and rank them from the Easiest to the Hardest. Score the easiest puzzle with a 1, the one that’s a little more difficult with a 2, the one that’s even more difficult with a 3, and the hardest puzzle with a 4.

Explain some of your reasons for the rankings you gave: