

HandsOnL01

Counting and Sorting Jellybeans in a Bag

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Scenario

- You have a bag filled with jellybeans of three different colors: pink, green, and yellow.
- The 3 cups that cannot be moved arranged in a line in front of you.
- The result should be that all the jellybeans have been removed from the bag and placed into cups.
- Each cup should only contain 1 color.
- The jellybeans should be placed into the cups so that the pile that is the smallest is on the left, and the pile that is the largest is on the right.
- Jellybeans cannot be placed anywhere except in the bag or in a cup.

Objective

- A numbered list of instructions for explaining how to sort the jellybeans so that the pile that is the smallest is on the left, and the pile that is the largest is on the right.

Collect and define the items needed to perform this task

- Bag: A container made of flexible material with an opening at the top, which may or may not have handles, and is used for carrying solid items or other solid containers.
- Jellybean: Small bean-shaped sugar candies with soft candy shells and thick gel interiors.
- Cup: A small, round, open container which sometimes has a handle; usually used for drinking beverages or to hold solid items.

Assumptions

- This task is being performed over a large, clean table.
- The bag made of paper, is sufficiently sized to hold the jellybeans without tearing, and has handles.
- The bag is new and not wrinkled; it is smooth.
- The bag contains different quantities of the jellybeans of each color.
- The jellybeans of three different colors are mixed within the bag.
- You are allowed to pick up and move the bag.
- You are allowed to tear the bag to expose the jellybeans and facilitate counting them.
- You are allowed to touch the jellybeans with your (gloved) hands.
- All jellybeans are of the same size.
- All jellybeans are whole, so that there are no partial jellybeans.
- Cups are the same type, material, and size.
- The size of the cups is sufficient to hold even the greatest quantity of jellybeans.
- Left means the left-hand side of the way when looking in the forward direction toward the bag of jellybeans.
- The cups are aligned in a row besides the bag of jellybeans, to the right of the bag.
- You are not allowed to eat the jellybeans unless and until this task is properly completed.

Examining The Contents of The Bag

1. Open the bag by pulling the handles apart without tearing it.
2. Look inside the bag.
3. Carefully tear the paper bag at all four edges until the bag unfolds over the table in the shape of a 'plus' sign.

Counting And Sorting the Jellybeans

1. With your hands, separate the jellybeans into groups of all three colors.
2. Each group of jellybeans should be moved from the center of the 'plus' sign to a different area of the bag.
3. Within each group of jellybeans, count the number of jellybeans.

Sorting the Jellybeans

1. Starting with the smallest group of color-sorted jellybeans, gather the entire group of jellybeans and place them in the leftmost cup.
2. Gather all the jellybeans in the middle-sized group and place them in the middle cup.
3. Gather all the jellybeans in the largest group and place them in the rightmost cup.

Congratulations, you have just counted and sorted the jellybeans of all three colors!