



LESSON 23

Make Inferences About Samples

What You Need

- Recording Sheets
- bag with 100 of the same object in two different colors

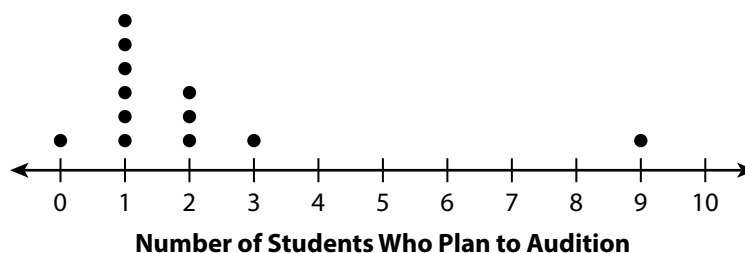
What You Do

- 1 Determine which color is Color A and which color is Color B. Take turns. Without looking, select 10 objects from the bag to create a sample. Count the number of each color in your sample. Then record your sample counts on the **Recording Sheet**. Return the objects to the bag and shake to mix. Repeat to take a total of 20 samples.
- 2 Work together as a group to display your sample data in a separate dot plot for each color on the **Recording Sheet**. Use the dot plots to decide whether to use the mean or the median to summarize the data.
- 3 Use your choice to make an inference about the number of each color object in the bag.



Check Understanding

Maya and Darrell survey 12 random samples of 10 students at their school about whether they plan to audition for the school play. The results are shown in the dot plot. Maya infers that 20% of students at the school plan to audition. Darrell infers that 10% do. Whose inference is more reasonable? Explain.



Go Further

Count the actual number of each color object in your group's bag. How did your inferences based on the samples compare to the actual population? Explain why you think there are similarities or differences.



Make Inferences About Samples

RECORDING SHEET

Sample	Number of Color A	Number of Color B
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

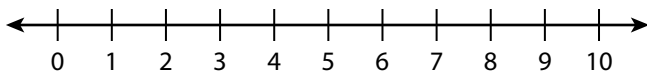
Sample	Number of Color A	Number of Color B
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		



Make Inferences About Samples

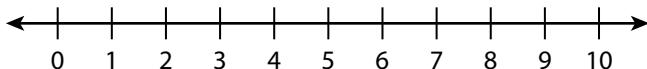
RECORDING SHEET *continued*

Use these number lines to display your sample data for each color in a dot plot. Then determine and record the mean and median for each data set.



Mean _____

Median _____



Mean _____

Median _____

Make an inference about each color object in the bag. Will you use the mean or median to make your inference? Explain why.

Color A: Approximately _____ of the objects in the bag are this color.

Color B: Approximately _____ of the objects in the bag are this color.