

# LESSON 12.3 Comparing Populations

**TEKS** Measurement and data—7.12.C Compare two populations based on data in random samples from these populations, including informal comparative inferences about differences between the two populations.



## ESSENTIAL QUESTION

How can you use random samples to compare two populations?

### EXPLORE ACTIVITY 1



**TEKS** 7.12.C

## Using Dot Plots to Compare Populations

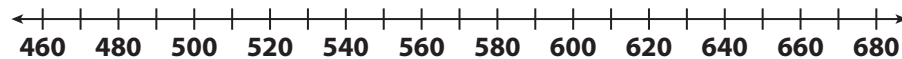
You can compare two populations by taking a random sample of each population and comparing the samples using dot plots.

A test prep company gives its students a Pretest before the course and a Posttest after the course is completed. The test prep company picks a random sample of 10 students from each testing session.

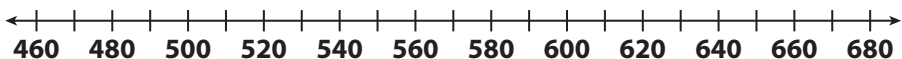
Pretest Scores
520, 510, 550, 580, 600, 480, 480, 460, 460, 640

Posttest Scores
510, 480, 510, 610, 590, 670, 550, 560, 600, 610

- A** Make a dot plot for the sample of Pretest scores.



- B** Make a dot plot for the sample of Posttest scores.



- C** Compare the dot plots. The plots have a similar **center / spread**, but the Posttest values are shifted to the \_\_\_\_\_.

### Math Talk

Mathematical Processes

What single statistic could you use to describe the score change from the Pretest to Posttest?

### Reflect

1. What can you infer about the populations by comparing the dot plots for the samples?

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