

Unit 8 Lesson 19: Comparing Populations With Friends

1 Features of Graphic Representations (Warm up)

Student Task Statement

Dot plots, histograms, and box plots are different ways to represent a data set graphically.

Which of those displays would be the easiest to use to find each feature of the data?

1. the mean
2. the median
3. the mean absolute deviation
4. the interquartile range
5. the symmetry

2 Info Gap: Comparing Populations

Student Task Statement

Your teacher will give you either a *problem card* or a *data card*. Do not show or read your card to your partner.

If your teacher gives you the *problem card*:

1. Silently read your card and think about what information you need to be able to answer the question.
2. Ask your partner for the specific information that you need.
3. Explain how you are using the information to solve the problem.

Continue to ask questions until you have enough information to solve the problem.

4. Share the *problem card* and solve the problem independently.
5. Read the *data card* and discuss your reasoning.

If your teacher gives you the *data card*:

1. Silently read your card.
2. Ask your partner “*What specific information do you need?*” and wait for them to *ask* for information.

If your partner asks for information that is not on the card, do not do the calculations for them. Tell them you don’t have that information.

3. Before sharing the information, ask “*Why do you need that information?*” Listen to your partner’s reasoning and ask clarifying questions.
4. Read the *problem card* and solve the problem independently.
5. Share the *data card* and discuss your reasoning.

Pause here so your teacher can review your work. Ask your teacher for a new set of cards and repeat the activity, trading roles with your partner.

3 Comparing to Known Characteristics (Optional)

Student Task Statement

1. A college graduate is considering two different companies to apply to for a job. Acme Corp lists this sample of salaries on their website:

\$45,000 \$55,000 \$140,000 \$70,000 \$60,000 \$50,000

What typical salary would Summit Systems need to have to be meaningfully different from Acme Corp? Explain your reasoning.

2. A factory manager is wondering whether they should upgrade their equipment. The manager keeps track of how many faulty products are created each day for a week.

6 7 8 6 7 5 7

The new equipment guarantees an average of 4 or fewer faulty products per day. Is there a meaningful difference between the new and old equipment? Explain your reasoning.