Comparing Sets of Data – Grade Eight

Ohio Standards Connection:

Data Analysis and Probability

Benchmark C
Compare the characteristics of the mean, median, and mode for a given set of data, and explain which measure of center best represents the data.

Indicator 5
Explain the mean’s sensitivity to extremes and its use in comparison with the median and mode.

Benchmark D
Find, use and interpret measures of center and spread, and use those measures to compare and draw conclusions about sets of data.

Indicator 4
Compare two sets of data using measures of center (mean, median, mode) and measures of spread (range, quartiles, interquartile range, percentiles).

Benchmark F
Construct convincing arguments based on analysis of data and interpretation of graphs.

Indicator 9
Construct convincing arguments based on analysis of data and interpretation of graphs.

Lesson Summary: Students create a survey, gather data and describe the data using measures of center (mean, median and mode) and spread (range, quartiles and interquartile range). Students use these measures to interpret, compare and draw conclusions about what the data show. Conclusions and convincing arguments to support those conclusions are incorporated into class discussion and a formal presentation.

Estimated Duration: Two hours and 20 minutes

Commentary:
This lesson was reviewed by Ohio teachers. Some of the teacher comments about the lesson include:

- “Students are actively involved in the collection of data. It will be relevant to them and therefore more interesting to complete.”
- “The attachments are thorough and ready-to-use.”

Pre-Assessment:
Use information gathered through students’ responses to the pre-assessment activity to determine their level of understanding and prerequisite skills in using measures of center and spread to describe data.

- Distribute Attachment A, Pre-Assessment Activity Sheet. Direct students to “brainstorm” terms and measures that can be used to describe the data. Students work on the task individually and record their responses on the activity sheet. Give students three to five minutes to generate initial lists of terms and measures.
- Ask students to find partners or organize students into groups of two. Partners compare their responses and add any new terms or measures to the lists resulting from their discussions. Allow three to five minutes for students to share and discuss their responses with their partners.

Instructional Tip:
Decide how to partner students. Observe students working individually during the initial activity and identify students who may be struggling and those with strong skills. Pairing students with different skills often benefits both students; because students think about problems in different ways.
Comparing Sets of Data – Grade Eight

- Facilitate a discussion of the various terms and statistical measures identified by students. Use a “round-robin” strategy by asking each pair of students for one term or measure from their list. Write responses on chart paper, the board or a transparency.
- Lead students in a discussion of the terms and measures on the list. Ask students to define the terms, tell how to find them and what they indicate about the data.
- Extend the discussion, as needed, to include a review of key prerequisite terms and measures for the lesson; e.g., mean, median, mode and range. Some terms that may or may not be identified initially include outlier, quartile and interquartile range, terms generally used to describe larger data sets than in the pre-assessment activity.

Scoring Guidelines:
- Use the activity to identify students’ needs and, if needed, to determine the level of review or additional instruction required.
- Students’ responses are not scored.

Post-Assessment:
Students complete three tasks designed to assess knowledge and skills in comparing two sets of data using measures of center and spread, Attachment B, Post-Assessment Activity.

Scoring Guidelines:
Use Attachment C, Post-Assessment Answer Key to guide scoring.

Instructional Procedures:
Part One

Instructional Tip:
Complete this component the day before the lesson to more efficiently implement the lesson activities.

Ohio Standards Connection:
Related Benchmark A
Create, interpret and use graphical displays and statistical measures to describe data; e.g. box-and-whisker plots, histograms, scatterplots, measures of center and variability.

Indicator 1
Use, create, and interpret scatterplots and other types of graphs as appropriate.

Mathematical Processes Benchmarks
A. Formulate a problem or mathematical model in response to a specific need or situation, determine information required to solve the problem, choose method for obtaining this information, and set limits for acceptable solution.
D. Apply reasoning processes and skills to construct logical verifications or counter-examples to test conjectures and to justify and defend algorithms and solutions.
E. Use a variety of mathematical representations flexibly and appropriately to organize, record and communicate mathematical ideas.
Comparing Sets of Data – Grade Eight

1. Tell students that for the next lesson the class needs to create a survey or questionnaire with 12 to 15 questions. (Ask each group of two or three students to create one question to make the survey and data more manageable). Organize students into groups of two or three to identify interesting data to collect and a survey question to generate that data. Instruct the students that the survey questions must result in quantitative (numerical) data; therefore, questions that can be answered “yes” or “no” are not permitted.

2. Allow each group five or six minutes to generate a survey question. Circulate among the groups to check the appropriateness of the questions. Assist students, as needed, in identifying questions that may be unclear or may generate non-numerical responses. Collect each group’s question.

3. Use the questions to create a survey form using Attachment D, Survey Form. Examples of questions that could be used for the survey are provided on Attachment E, Sample Survey Questions.

Part Two

4. Complete the pre-assessment activity, Attachment A.

5. Transition to the lesson activities by explaining to students that they will compare two sets of data (shoe sizes of girls and shoe sizes of boys among the students in the class).

6. Ask each student to write his or her shoe size on the data collection form provided, Attachment F, Shoe Size Data Collection Forms, or on a slip of paper. Emphasize that only shoe size and gender should be indicated on the form. Names are not to be included on the form or paper.

7. Collect the completed forms and pose the following questions:
   - When comparing two sets of data, what information is important to know?
   - What is helpful to know? What is unnecessary to know?

8. Provide time for students to share responses and ask students to explain why the information is important, helpful or unnecessary. Some students may respond specifically to the shoe size task while others may give more general responses.

9. Allow discussion as responses are shared, particularly when students may disagree with a response; however, do not prolong this initial discussion. “Jump Start” students’ thinking about different ways to compare sets of data.

10. Distribute copies of Attachment G, If the Shoe Fits Activity. Direct attention to the tasks in the activity – finding measures of center and spread for each data set, displaying the data in a box-and-whisker plot and describing how the data are similar and different.

11. Create two columns on chart paper, the chalkboard or a transparency to record the shoe size data. Label the columns Female Shoe Sizes and Male Shoe Sizes.

12. Have a student record the data on the chart paper, chalkboard or transparency as you read the information from the completed forms.

13. Students also record the data on their activity sheets. Encourage students to think about ways to organize the data before copying the values on their activity sheet; however, do not have a class discussion or suggest strategies at this time.

14. Provide time for students to complete the three tasks and/or assign for practice/homework.

15. Distribute the survey constructed from the questions generated prior to beginning the lesson (Instructional Steps 1-3) and assign students to collect responses to the questions for use in
Comparing Sets of Data – Grade Eight

the next part of the lesson. Require one student from each pair to obtain responses for all questions from three adults (age 18 or older) and the other student to obtain responses from three youths (age 17 or younger). Alternatively, divide the class into two equal-sized groups with one group responsible for gathering responses from adults and one group gathering responses from youths. The purpose of collecting data from adults and youths is to provide two sets of data for each question that can be compared using measures of center and spread.

16. Summarize the lesson by leading a review of key concepts and terms. Ask the following guiding questions:
   • Why are we collecting the survey data?
   • Why are we gathering responses from adults and youths?
   • Why is it important to learn about mean, median and mode (measures of center)? Range, quartile and interquartile range (measures of spread)?
   • What careers and professions use mean, median and mode (measures of center)? Range, quartile and interquartile range (measures of spread)?
   • How would you explain mean, median and mode (measures of center) to a fourth grade student? Range, quartile and interquartile range (measures of spread) to a fourth grade student?
   • What do you think we will do with the data gathered through the survey?

Part Three

17. Have students compare and discuss their responses to the three components of If the Shoe Fits Activity Sheet, Attachment G, in pairs or small groups. Ask groups to identify any questions or areas of disagreement they may have about the solutions to the tasks. Allow three to five minutes for this initial discussion.

18. Facilitate a whole-class discussion of the tasks and their solutions. Ask students to raise any questions about the tasks and solution processes. Identify misconceptions and common errors. Determine intervention needs; e.g., individual students who may need additional practice or instruction in finding the median of a set of data involving fractions; providing additional whole group instruction in making a box-and-whisker plot.

19. Implement a process for reporting the responses from the student-generated survey questions created using Attachment D, Survey Form. One strategy is to create an individual summary sheet for each question. On the summary sheet, include the question and two columns marked “Adults” and “Youths.” Post the summary sheets around the classroom. Have students circulate around the room writing their data in the appropriate column on each sheet. Or, circulate the summary sheets among students while they are seated at their tables or desks. Instruct students to add their data to each sheet as it is passed from student to student.

20. Organize students into the same groups that created the survey questions (steps 1-4 of the Instructional Procedures). Have each student find the mean, median, mode, range, quartiles and interquartile range of the two sets of data (for “Adults” and for “Youths”) gathered for their question.

21. Direct each pair or small group to create a poster to summarize and display the survey data for their question. Inform students that they will present their findings to the class and need to be prepared to defend their statements and conclusions. The poster should include the following components:
Comparing Sets of Data – Grade Eight

- survey question
- data by category (adult and youth)
- mean, median, mode, range, quartile and interquartile range for each category of data
- box-and-whisker plot for each set of data
- comparisons and conclusions based on the data, including but not limited to, similarities and differences in the data, which measure most accurately represents the data and any outliers that affected the data.

**Instructional Tip:**
The survey data provides a larger set of data and computing the various measures of center and spread will take more time if done “by hand.” These larger data sets are also more appropriate for box-and-whisker plots than the small sets used in the pre- and post-assessments. Encourage students to use calculators and other available technology to find the measures and to display data. Use graphing calculators or data analysis/statistics software to calculate measures of center and spread and to create box-and-whisker plots. Use presentation software to display the information to the class. Focus the lesson and assessment on using measures of center to compare and evaluate sets of data. The lesson activities provide opportunities to practice computation skills; however, do not have computational accuracy carry a disproportionate weight in evaluating students’ understanding and progress toward demonstrating the benchmarks and indicators.

22. Each team presents its findings to the class. Set an appropriate time limit for each presentation (i.e., three to five minutes per group) based on time constraints. Encourage students to ask questions and challenge their classmates on any statements that do not appear to be supported by the data.

23. Close the lesson by having the class participate in a guided discussion as a whole group or in small groups. Questions that may be used to guide the discussion include
- Did the method of data collection affect the results?
- Were any responses to the survey question(s) very different from the other responses?
- How are the measures of center and spread affected when there is an outlier in the data? On which measure would an outlier have the greatest effect?
- Is it possible to have different interpretations or conclusions based on the data? How can different interpretations and conclusions be generated by changing the display and measures of center or spread used to summarize the data?
- What do you think is the purpose for learning about the measures of center and spread? Where do you see yourself using these mathematical calculations?
- How reliable are the commercials and advertisements stating that four out of five people would recommend their product? Explain your answer.
- What did you learn from this lesson?

Comparing Sets of Data – Grade Eight

Differentiated Instructional Support:
Instruction is differentiated according to learner needs, to help all learners either meet the intent of the specified indicator(s) or, if the indicator is already met, to advance beyond the specified indicator(s).

- Assign a research question which is relevant or of interest to individual learners.
- Provide opportunities for students to practice with sets of data carefully chosen to reinforce skills prior to asking students to search for data.
- Review terms with students in advance. Make a word wall to assist students in using mathematical terms.
- Give the students a head start and/or extended time to finish the tasks, as needed.
- Create a differentiated scoring rubric to be used with the poster and/or presentation and consider using this activity as alternative post-assessment.
- Provide examples of quantitative questions.
- Remind students that they could ask the adults working in the school, a relative or a neighbor for responses to the survey questions.
- Provide a scribe or assist students who may have difficulty recording or copying the data as it is shared with the class.
- Provide an alternative assignment for students who have demonstrated advanced knowledge and skills; for example, allow students to select a topic or question to research, collect or find multiple sets of data related to the topic or question and analyze the data using measures of center and spread.
- Allow assessments to be completed orally when writing prevents students from communicating understanding.

Extensions:
- Assign or allow students to select a quantitative statistic to research. Examples of statistics students may research include:
  1. average price of houses in their neighborhood;
  2. average salary of professional basketball players;
  3. average price of houses or cars;
  4. census information for the state, region and/or nation.
Have students find a minimum of 30 values of data for their topics and to compare the results of their small data samples to state or national statistics. For example, compare the median price of 30 houses in a town or area with the median price of houses in Ohio. Include all or selected measures of center and spread in the assignment and a presentation based on the findings.
- Gather large sets of data and use data analysis and statistics software to calculate the measures of center and spread and to display the data.
- Ask students to create a set of data that includes 30 numbers that has a mean of 15, a median of 20, and a mode of 12. Can you create a different set of data with the same mean, median and mode? What observation and conjectures can be made about the measures of center form these two sets of data?
Comparing Sets of Data – Grade Eight

Home Connections:
- Capitalize on the opportunity for the students to take their survey/questionnaire home and ask their parent(s)/guardian to answer the questions. This activity will generate a discussion between the students and the parent/guardian about why this information is being collected, what the student is learning in mathematics class and where mathematics can be found in the workplace and daily life.
- Have students cut out a specified number of newspaper or magazine articles that include one or more of measures of center and spread that have been discussed in the lesson or jot down something that was shared in a television or radio news report or advertisements that involved one of these statistical measures.

Interdisciplinary Connections:
- Students create a brochure/newspaper regarding the results of their study. The students write articles about what they found, research to see if it aligned with related studies previously done and offer arguments as to why the data showed what it did.
- Creative writing could also be incorporated. The students could write stories that would include the actual statistics they found in their studies.

Materials and Resources:
The inclusion of a specific resource in any lesson formulated by the Ohio Department of Education should not be interpreted as an endorsement of that particular resource, or any of its contents, by the Ohio Department of Education. The Ohio Department of Education does not endorse any particular resource. The Web addresses listed are for a given site’s main page, therefore, it may be necessary to search within that site to find the specific information required for a given lesson. Please note that information published on the Internet changes over time, therefore the links provided may no longer contain the specific information related to a given lesson. Teachers are advised to preview all sites before using them with students.

For the teacher: overhead projector, transparency sheets and markers or computer and projection device, chart paper and markers
For the student: poster board and crayons/markers/colored pencils or access to computer with presentation software, calculators

Vocabulary:
- interquartile range
- mean
- measures of center
- measures of spread
- median
- mode
- outlier
- quantitative data
Comparing Sets of Data – Grade Eight

- quartile
- range

**Technology Connections:**
- Use calculators or graphing calculators to find the measures of center, spread, and box-and-whisker plots.
- Use presentation software to create data displays.
- Use data analysis or statistics program to compute measures of center and spread and to create box-and-whisker plots.
- Use computer-based survey tools to design survey, collect data on-line, and summarize survey responses.

**Research Connections:**


**Attachments:**
Attachment A, *Pre-Assessment Activity*
Attachment B, *Post-Assessment Activity*
Attachment C, *Post-Assessment Answer Key*
Attachment D, *Survey Form*
Attachment E, *Sample Survey Questions*
Attachment F, *Shoe Size Data Collection Forms*
Attachment G, *If the Shoe Fits Activity*
Comparing Sets of Data – Grade Eight

Attachment A
Pre-Assessment Activity

Name _______________________________  Date ___________________

Directions: Think about terms and statistical measures that can be used to describe the set of data listed below.

20  12  0  15  25  18  20  24  30  28

Use the table below to record terms and statistical measures that can be used to describe the data. List as many different terms and statistical measures as you can in the time permitted.

<table>
<thead>
<tr>
<th>Terms</th>
<th>Statistical Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Mr. Brown and Mrs. Smith each gave their class the same 20-point quiz. The scores for each class are listed below:

**Quiz Scores for Mr. Brown’s Class:**
18  17  18  14  16  20  15  16  18  16  18  4

**Quiz Scores Mrs. Smith’s Class:**
20  14  16  15  11  14  13  14  6  14  12

**Task 1:** Find the mean, median, mode, range, quartiles and interquartile range for each class and write the values in the table below.

<table>
<thead>
<tr>
<th>Statistical Measure</th>
<th>Mr. Brown’s Class</th>
<th>Mrs. Smith’s Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Quartile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Quartile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interquartile Range</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comparing Sets of Data – Grade Eight

Attachment B (Continued)
Post-Assessment Activity

Task 2: Create a box-and-whisker plot for the data for each class.

Task 3: Answer each question and provide an explanation to support your answer.

1. Which measure of center most accurately represents the scores for Mr. Brown’s class and which measure of center most accurately represents the scores for Mrs. Smith’s class?

2. Whose class performed better on the quiz? Use measures of center to justify your answer.

3. What observations can be made about the scores for the two classes?

4. Do any of the scores appear to be outliers? Which ones?

5. Which measure(s) of center and spread could Mr. Brown use to brag about how well his class did on the quiz?
Comparing Sets of Data – Grade Eight

Attachment C
Post-Assessment Answer Key

Task 1:

<table>
<thead>
<tr>
<th>Statistical Measure</th>
<th>Mr. Brown’s Class</th>
<th>Mrs. Smith’s Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>15.8</td>
<td>13.5</td>
</tr>
<tr>
<td>Median</td>
<td>16.5</td>
<td>14</td>
</tr>
<tr>
<td>Mode</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Range</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>First Quartile</td>
<td>15.5</td>
<td>12</td>
</tr>
<tr>
<td>Third Quartile</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>Interquartile Range</td>
<td>2.5</td>
<td>3</td>
</tr>
</tbody>
</table>

Task 2: Create a box-and-whisker plot for the data for each class.
Comparing Sets of Data – Grade Eight

Attachment C (continued)
Post-Assessment Answer Key

Task 3
1. Which measure of center most accurately represents the scores for Mr. Brown’s class and which measure of center most accurately represents the scores for Mrs. Smith’s class?

   The median most accurately represents the scores for both classes.

2. Whose class performed better on the quiz? Use measures of center to justify your answer.

   Using all of the measures of center, Mr. Brown’s class performed better. Student explanations will vary. Accept reasonable explanations.

3. What observations can be made about the scores for the two classes?

   A possible answer may explain that the means are lower than the medians.
   Other possible answers:
   Scores in Mrs. Smith’s class are more widely spread than in Mr. Brown’s class.
   While there is only one outlier (with score 4) in Brown’s class, there are two outliers in Smith’s class (with scores 6 and 20).
   About half of Brown’s class scored between 15.5 and 18, while about half of Smith’s class scored between 12 and 15.

4. Do any of the scores appear to be outliers?

   The score of 4 is an outlier in Mr. Brown’s class and both 6 and 20 are outliers in Mrs. Smith’s class.

5. Which measure(s) of center and spread could Mr. Brown use to brag about how well his class did on the quiz?

   Mr. Brown could use the mode, median, mean or quartiles to brag about the performance of his class.
## Comparing Sets of Data – Grade Eight

**Attachment D**

**Survey Form**

<table>
<thead>
<tr>
<th>Name ___________________________</th>
<th>Date ________________</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question</strong></td>
<td><strong>Response #1</strong></td>
</tr>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td></td>
</tr>
</tbody>
</table>
Comparing Sets of Data – Grade Eight

Attachment E
Sample Survey Questions

- How many ounces of water do you drink in a day?
- How many hours do you sleep on an average night?
- What is your resting heart rate in beats per minute?
- How many minutes a day do you watch television?
- What size shoe do you wear?
- How many calories do you consume in a day?
- How many minutes a night do you spend doing homework/work?
- How many phone calls do you make on an average day?
- How far is your commute to school/work?
- How many times do you brush your teeth on a daily (or weekly) basis?
- How many siblings do you have?
- How much money do you spend on lunch each day?
## Comparing Sets of Data – Grade Eight

### Attachment F

**Shoe Size Data Collection Forms**

<table>
<thead>
<tr>
<th>Female</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td>Shoe Size ______</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comparing Sets of Data – Grade Eight

Attachment G
If the Shoe Fits Activity

Name ________________________________  Date _______________

List the data for your class in increasing order.

Shoe Sizes Reported by Female Students  Shoe Sizes Reported by Male Students

**Task 1:** Find the mean, median, mode, range, quartiles and interquartile range for each set of data and write the values in the table below.

<table>
<thead>
<tr>
<th>Statistical Measure</th>
<th>Shoe Sizes Reported by Female Students</th>
<th>Shoe Sizes Reported by Male Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Quartile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Quartile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interquartile Range</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comparing Sets of Data – Grade Eight

Attachment G (Continued)
If the Shoe Fits Activity

Task 2: Create a box-and-whisker plot for each set of data.

Task 3: Describe how the shoe size data sets are similar and how they are different. Use mathematical terms and statistical measures to explain and support your answers.