

9-1 Mean, Median and Mode

Grade Level and Subject:

Grade 8 Pre-algebra (OL, 1 periods, 50 minutes)

Instructional Objectives:

1. Students will be able to calculate and describe mean, median, mode, range, and outlier for a given set of data.
2. Students will be able to choose an appropriate central measure of tendency.

Concepts Addressed/Related Content Standards or Framework:

Concepts

Mean, Median, Mode, Range, Outlier, Central measure of tendency

PDE Standards

PA.2.6.5.B Describe data sets using mean, median, mode and range.

NCTM Standards

1. Find, use, and interpret measures of center and spread, including mean and inter-quartile range;

Materials Required:

1. TV/Monitor for warm-ups/displaying PPT notes and worksheets problems
2. Lesson packets (Notes, practice and work sheets)
3. Textbook – *Pennsylvania Mathematics Course 3* Pearson/Prentice Hall 2008 Edition
4. Blackboard

Engagement:

- 1.) Warm-up: PSSA Practice Problems from Foresight packet.

Procedure:

1. Ask students to complete the warm-up problem from packet. Hand out lesson packets.
2. As a class, discuss the warm-up problems.
3. Go through instructions for students to complete group activity and questions for the lesson that are located in the lesson packet.
4. Review results of activity with the class. Have each group put their results on the blackboard.
5. Discuss **how to and then find** the mean, median, and mode, and range for the total class based on the data.
6. As a class, discuss the meaning of mean, median, mode, and range and fill out the notes for these terms in the packet.
7. Complete the extra examples in the packet. (If time permits.)
8. Closure.

Key Discussion Questions:

1. What is another way of describing the mean of a set of data?
2. What is the median of a dataset describing as compared to the mode?

3. How do we find the median of a dataset when there is an even number in the data set? Why?
4. What is the range of a set of data describing?
5. When would we use mean, median, or mode to best describe a dataset? For example, would you use average or mode to describe the current most popular movie?

Closure:

What measure (mean, median, or mode) would best describe how well a baseball team hits? The most popular meal in the cafeteria?

Assessment:

Step #6, 7 of the procedure section for an informal assessment.

A more formal assignment will occur with section 9.2.

Extension Activities:

If the class finishes early, quickly divide the class into 2 teams. See which team can come up with the most examples of using mean, median, mode as measurements to describe data in real life. For each point, the team must have an example and why they chose the central tendency measure they did (and it must be correct). Each member of the winning team gets a ticket.