



GRADE 8

Hands-on-Activity

Six Weeks 3

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Lesson 8

Teacher Notes for Student Activity 2

MATERIALS: Per group of 2 students: 2 1-6 number cubes, calculator, a marker to record their data on the class projection page

PROCEDURE:

- Students complete Student Activity 2 in groups of 2. Assign each student group a group number.
- Students generate a data set of 10 data points. They calculate the mean absolute deviation. Each group will post their data set and MAD on the projection page. The goal is have the smallest MAD.

Distribute the materials for Student Activity 2 and before students begin working, ask the following questions:

- Can each group create their data set as described on their student page?

During Student Activity 2, roam the room and listen for the following:

- Can the students correctly find the mean?

During Student Activity 2, roam the room and look for the following:

- Can the students correctly find the distance from the mean for each data point?
- Can the students correctly find the mean of the distances?

Answers to these questions can be used to support decisions related to further whole class instruction or group and individual student instruction during tutorial settings.

Student Activity 2

Representing Proportional Relationships with Graphs, Tables, and Equations

Problem: Did we create a data set with a small mean absolute deviation?

Materials: 1 graphing calculator per student, 2 1-6 number cubes per 2 students, a marker per group of 2

Procedure: Work in groups of 2 for this activity. Decide who will be Student 1. Decide who will be Student 2. The teacher will assign you a group number.

Part I:

Round 1: Each student will roll the two number cubes.

- Student 1 rolls the 2 number cubes and finds the sum of the two numbers. Both students record the sum on the data point table as data point 1.
- Student 2 rolls the 2 number cubes and finds the product of the two numbers. Both students record the product of the data point table as data point 2.

Round 2:

- Student 1 rolls the 2 number cubes and finds the product of the two numbers. Both students record the product on the data point table as data point 3.
- Student 2 rolls the 2 number cubes and finds the sum of the two numbers. Both students record the sum of the data point table as data point 4.

Round 3:

- Student 1 rolls the 2 number cubes and finds the sum of the two numbers. Both students record the sum on the data point table as data point 5.
- Student 2 rolls the 2 number cubes and finds the product of the two numbers. Both students record the product of the data point table as data point 6.

Round 4:

- Student 1 rolls the 2 number cubes and finds the product of the two numbers. Both students record the product on the data point table as data point 7.
- Student 2 rolls the 2 number cubes and finds the sum of the two numbers. Both students record the sum of the data point table as data point 8.

Round 5:

- Student 1 rolls the 2 number cubes and finds the sum of the two numbers. Both students record the sum on the data point table as data point 9.
- Student 2 rolls the 2 number cubes and finds the product of the two numbers. Both students record the product of the data point table as data point 10.

Data Points									
Data Point 1	Data Point 2	Data Point 3	Data Point 4	Data Point 5	Data Point 6	Data Point 7	Data Point 8	Data Point 9	Data Point 10

Part II:

1. Both students work together to find the mean of their data set. _____(nearest tenth)
2. Both students work together to find the distance each data point is from the mean.

Data										
Distance from mean										

3. Both students work together to find the mean of the distances. _____(nearest tenth)

This value is called the mean _____ or MAD.

4. Student 1 will record their data on the class projection page.
5. After all the groups' have posted their data, which group had the smallest MAD?

How did your MAD compare to their MAD?

