

GRAPH YOUR MOTION! H.O.T. LESSON - RM

Grade Level and Course: 9th grade Algebra 1

Time Frame: 60 minutes

Content Objectives:

- Students will be able to relate what they see on the graph to rates of change.
- Students will be able to determine rate of change by reading and analyzing a graph.
- Students will be able to interpret a graph by connecting the graph to the context of this task.

Language Objectives:

- Students will be able to generate definitions in their own words for the vocabulary words.
- Students will be able to verbally explain how they got their answers on the task.
- Given a graph, students will be able to describe the graph in words.
- Students will be able to work on explaining their thinking and recording in words how to walk to match a given graph.

Materials:

- At least 6 CRBs
- Task card (1 per student)
- Calculator (optional)
- Exit Slip

Launch Task:

- Group students in groups of 3. Would you like to group these ahead of time?
- Review prior class discussion on the distance vs. time graphs. Have the graph used on the projector.
 - Discuss how to interpret the graph.
 - Talk about rates of change – positive, negative, and none.
 - Discuss how to find rates of change.
- Hand out task. Go over vocabulary words – new and old. Have students give definitions verbally in their own words.
 - Discuss rates of change in this context. What is a positive rate of change when working with the CBR? Negative?
- Prepare students for working with decimals. Tell students to round their answers to the tenths place.
- Talk about check-points and group questions only.

Group-Work:

- Monitor groups as they work on their task and positively reinforce group norms.
- Respond when a group has a question. Check to make sure it is a group question before answering!
- Respond when a group raises their hand for at a check point.
- Check Point:
 - Ask one student from the group to explain how the graph generated on the calculator reflects the students' motion.
 - Ask another student to explain the answer to part b. How did the group determine how far they walked?
 - Ask another student to explain the answer to part c. How did the group determine how far they walked?

- End group work time and have the groups return their supplies. Discuss the answers to the questions at the end of the task.

Closure:

- Collect all work.
- Hand out the Exit Slips and give students some time to complete these.
- Provide students with positive feedback on students' behavior and participation in the groups.