Equations of My Road

5604

Introduction

In this activity, students use a map to determine the slope of a road.

Grades 9-12

NCTM Algebra Standards

- Understand patterns, relations, and functions
- Analyze functions of one variable by investigating rates of change, intercepts, zeros, asymptotes, and local and global behavior

Files/Materials Needed

Map.act, MapEqu.act

1

a. Launch TI-Navigator™ on the computer and start the session.
b. Have each student log into **NavNet** on their calculator.

2

a. Load the activity settings file ***Map.act***.
b. Select the **Graph** tab and start the activity.
c. Under **View**, check **Individualize Student Cursors** so that students will be able to recognize their location on the map.
d. Have students move their cursor to a point on a named road. Tell them to find the coordinates of any two points on the road and then determine the slope by using change in *y* divided by change in *x*.
e. Instruct students to use one of their points and the slope found above to write the equation of the line in slope-intercept form.

3

a. Load the activity settings file ***MapEqu.act***.
b. Have students submit their equations from step 2e. Students may edit their equations if needed and resubmit them.
c. Discuss the results with the class.

EXTENSION

4

Repeat the activity with images of local maps of your neighborhood. Students can find the slope of the road the school is on, or the slope of the road they live on!