

Writing Formulas for Piecewise Functions

by – Brittany Zweibel

Activity overview

Students will practice writing formulas for piecewise functions, and be able to check their answers in the calculator.

Concepts

**Writing equations of different functions (lines, quadratics, absolute value)*

**Evaluating the functions*

**Identifying the domain and range*

Teacher preparation

Students should have seen piecewise functions prior to this activity. This activity is meant to help them write the formulas, but they should have experienced them before.

Classroom management tips

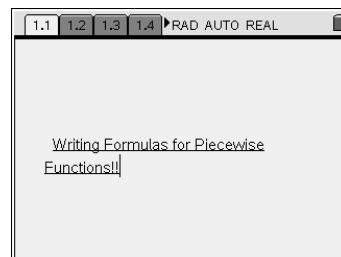
For this activity, have the students work in pairs.

TI-Nspire Applications

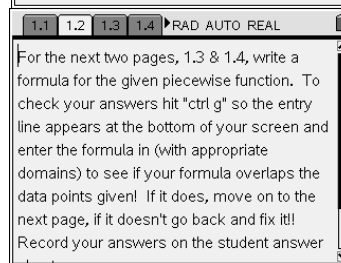
The Nspire Numeric or CAS system may be used.

Step-by-step directions

1. Open activity “Writing Formulas for Piecewise Functions”



2. On page 1.2, the directions are given for the students. Lead students through this and then let the students work in pairs.



Writing Formulas for Piecewise Functions

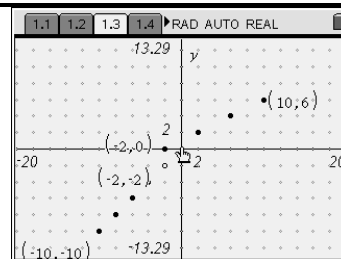
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Grade level: 11-12

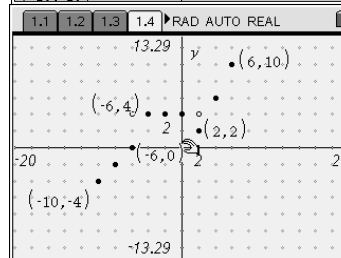
Subject: Precalculus, Algebra II

Time required: 45 to 90 minutes

3. Have students complete directions for 1.3. Have them record their answers on the student answer sheet.



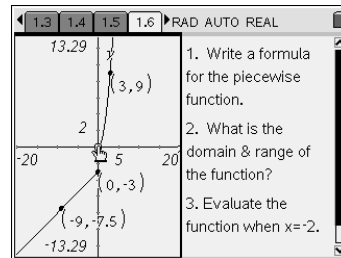
4. Have students complete directions for 1.4. Have them record their answers on the student answer sheet.



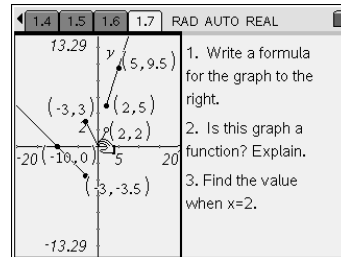
5. Before students move on to 1.6 & 1.7, have them answer the questions on the student answer sheet about 1.3 & 1.4.

6. For page 1.6 & 1.7, have students follow the directions on each individual page. Have students record their answers on the student answer sheet.

1.6:



1.7:



Activity extensions

- As an extension, have the students come up with their own piecewise function. Have them hand in the formula (with restricted domain), the graph, and questions for the rest of the class to answer!!

Student TI-Nspire Document

Writing formulas for piecewise functions.tns