

Broken Calculator

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Topic: Number and Operations

Resources: <https://joshp112358.github.io/bcMobile/>

Curricular Competencies:

- Communication and Representing
 - Explain and justify mathematical ideas and decisions
- Reasoning and Analyzing
 - Use technology to explore mathematics
- Understanding and Solving
 - Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving

Grade Levels: 5 (could be for lower or maybe 6)

Description:

Students explore number concepts and number operations through the use of the online broken calculator app. Numbers on a calculator are “broken” and students must use operations to work around the broken number. This activity has a low floor and high ceiling. To scale down the activity, students may be restricted to a set to numbers or operations. To scale up the activity, students may be restricted to sets like integers, rational numbers, or irrational numbers. There may also be conditions on for using more complex operations like square roots or sines and cosines. Through this investigation, students will expand their conceptual understanding of numbers beyond counting objects.

Teacher may also wish to keep track of students’ different methods. By doing so, other students may consider other methods they had not thought of themselves.