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General Education Math Lesson Plan

Negative Exponents

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Standard: 6.PRF.2a2 Use variable to represent numbers and write expressions when solving real world problems

6.NO.1i2 Solve numerical expressions involving whole number exponents

Materials:

Activities:

- Focus and Review: Review simplifying terms with positive exponents
- Lecture: Teacher works through a variety of problem simplifying terms with negative exponents. During this lecture, the teacher begins by using the chart below (highlighting the pattern) to demonstrates what happens to a terms as it is raised to both positive and negative exponents. **Remind students negative exponents do not indicate a negative value, but a fraction instead.**

10^{-2}	10^{-1}	10^0	10^1	10^2	10^3
$\dfrac{1}{100}$	$\dfrac{1}{10}$	1	10	100	1000

- Guided Practice: Students simplify a variety of expressions from their textbook in pairs
- Independent Practice: Students complete activity sheet

Activity: Create a universally designed version of the above lesson

UDL Planning	My ideas
Representation- adaptations in materials (e.g., adapt for sensory impairments)	Highlight the sign associated with the exponent so students attend to the most relevant feature; stay with terms with a base of 10 until mastery before beginning with other numbers
Expression- how will student show learning (e.g., use of assistive technology; alternative project)	Ask students to identify whether the simplified term is a whole number or a fraction based on the sign associated with the exponent
Engagement- how will student participate in the activity	Student can work in a pair during independent practice; include personally relevant word problems or stories to add context.