

Using the Number Line K-12

- Designed to strengthen content understanding of the KAS mathematics content standards and Standards for Mathematical Practice
- Examine misconceptions and learn how to design experiences to confront these misconceptions
- Experience activities as a learner that promotes conceptual understanding
- Engage in discourse around the implications for best practice and highly effective teaching with other professionals

Grade Levels	Focus	Resources You Will Receive
K-2	<ul style="list-style-type: none"> • Counting and Cardinality • Number and Operations • Operations and Algebraic Thinking 	<ul style="list-style-type: none"> • Number line kits and individual number lines • Math Center resources • Proficiency matrix
3-5	<ul style="list-style-type: none"> • Number and Operations Base Ten • Number and Operations Fractions • Operations and Algebraic Thinking 	
6-8	<ul style="list-style-type: none"> • Comparing and Ordering Rational and Irrational Numbers • Number and Operations for Integers • Operations and Algebraic Thinking 	<ul style="list-style-type: none"> • Number line kits and individual number lines • Math Center resources

Grades 9-12: *Boost Any High School Student's Number Sense: Open Number Problems, Number Lines and More*

This day will focus on strategies to use in the high school mathematics classroom to help improve number sense by engaging all students in number problem solving and the use of the number line as seen in the work of Steve Leinwand and Marian Small. These strategies are meant to be embedded in and supportive of the current curriculum and not to be seen as something added. No numbers left out: rational, irrational, imaginary and complex.

Essential Question: How can you daily work to boost the number sense of students without adding to your current mathematics curriculum?

Big Idea: There is a strong correlation between number sense and scholastic math achievement. (A recent finding of Justin Halberda and his research team at The John Hopkins University.)

Learning Targets:

- We are learning what is meant by the term 'Number Sense'.
- We are learning to write and make daily use of open number problems that support the math content at hand while boosting each student's overall number sense.
- We are learning to use the number line in unconventional ways to heighten both conceptual understanding and number sense in the high school mathematics classroom.

