To Initiate Critical Conversations, *Catalyzing Change* makes four key recommendations.
High school mathematics should discontinue the practice of tracking teachers as well as the practice of tracking students into qualitatively different or dead-end course pathways.

**Essential Concepts in Probability**

- Two events are independent if the occurrence of one event does not affect the probability of the other event. Determining whether two events are independent can be used for finding and understanding probabilities.

- Conditional probabilities—that is, those probabilities that are “conditioned” by some known information—can be computed from data organized in contingency tables. Conditions or assumptions may affect the computation of a probability.

Sampling distribution of a sample statistic:

- The sampling distribution of a sample statistic formed from repeated samples for a given sample size drawn from a population can be used to identify typical behavior for that statistic. Examining several such sampling distributions leads to estimating a set of plausible values for the population parameter, using the margin of error as a measure that describes the sampling variability.
Classroom instruction should be consistent with research-informed *and equitable* teaching practices. Mathematics teaching involves not only helping students learn concepts and develop skills and understanding but also empowering students to see themselves as capable of participating in and being doers of mathematics.

High schools should offer continuous four-year mathematics pathways with all students studying mathematics each year, including two to three years of mathematics in a common shared pathway focusing on the Essential Concepts.

Stories of Catalyzing Change in Action!

Case studies of how states, districts and schools are transforming math education.

www.nctm.org/change

- Colorado’s Use of the Essential Concepts
- Escondido Union High School District: A Systemic Approach to Change
- San Francisco Unified School District’s Work to End Student Tracking With Meaningful Math Instruction
- Louisiana’s Intensive Algebra 1 Pilot