

## Engaging With the Three Shifts of the Common Core State Standards for Mathematics

### Shift One: Focus strongly where the Standards focus.

1. In your groups, discuss ways you, as middle school and high school educators, could respond if someone asks you the following question: "Why so much focus in K-8? There's so much math that students could be learning, why limit them?"

2.

Grade	Which two of the following represent areas of major focus for the indicated grade?		
K	Compare numbers	Use tally marks	Understand meaning of addition and subtraction
1	Add and subtract within 20	Measure lengths indirectly and by iterating length units	Create and extend patterns and sequences
2	Work with equal groups of objects to gain foundations for multiplication	Understand place value	Identify line of symmetry in two dimensional figures
3	Multiply and divide within 100	Identify the measures of central tendency and distribution	Develop understanding of fractions as numbers
4	Examine transformations on the coordinate plane	Generalize place value understanding for multi-digit whole numbers	Extend understanding of fraction equivalence and ordering
5	Understand and calculate probability of single events	Understand the place value system	Apply and extend previous understandings of multiplication and division to multiply and divide fractions
6	Understand ratio concepts and use ratio reasoning to solve problems	Identify and utilize rules of divisibility	Apply and extend previous understandings of arithmetic to algebraic expressions
7	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers	Use properties of operations to generate equivalent expressions	Generate the prime factorization of numbers to solve problems
8	Standard form of a linear equation	Define, evaluate, and compare functions	Understand and apply the Pythagorean Theorem
Alg.1	Quadratic inequalities	Linear and quadratic functions	Creating equations to model situations
Alg.2	Exponential and logarithmic functions	Polar coordinates	Using functions to model situations

**Shift Two: Coherence: Think across grades, and link to major topics within grades**

1. In each case, identify a connection across grades by filling in the blank space. (In some cases, any one of several answers might be reasonable.)

Earlier standard or cluster	Example of a later standard or cluster that depends directly on the earlier standard or cluster
4.OA.2	6. _____
5.NBT.7	6. _____
6.NS.A	7. _____
6.EE.3	7.EE. ____
6.EE.5	A- _____
7.RP.A	8. _____
8.F.A	_____

2. In the space below, describe how the following standards or clusters support one another.

		How do they support one another?
8.SP.A	8.F.B	
G-SRT.8	F-TF.8	
A-APR.3	F-IF.4	

### Shift Three: Rigor

1. *Make a true statement: Rigor = \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_*
2. In your group, discuss the following comment: "I'm not going to spend time on fluency; it should be a natural outcome of conceptual understanding."
3. The shift toward rigor is required by the Standards. Find and copy, in the space below, standards that specifically set expectations for each component of rigor.

Standards that require \_\_\_\_\_:

Standards that require \_\_\_\_\_:

Standards that require \_\_\_\_\_: