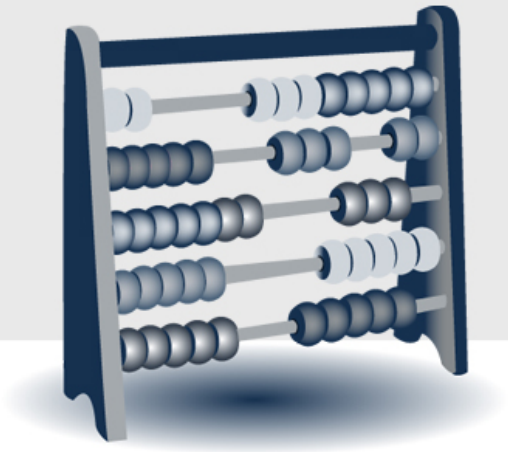
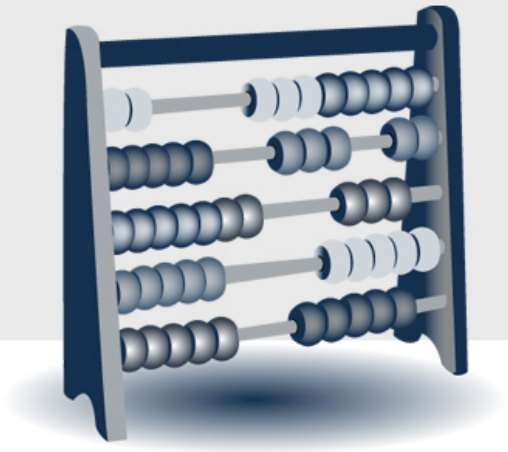
Del Mar Union School District

Parent Math Night



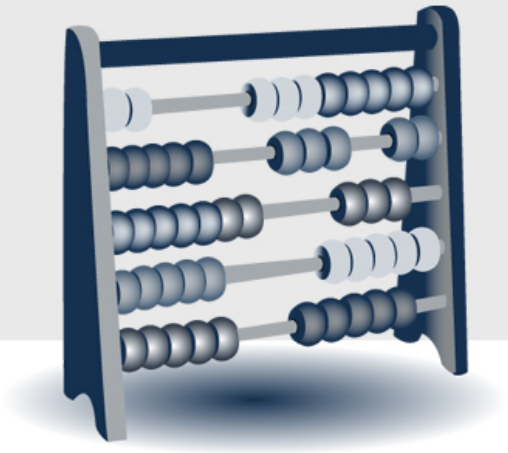
Welcome

- Thank you for joining us tonight.



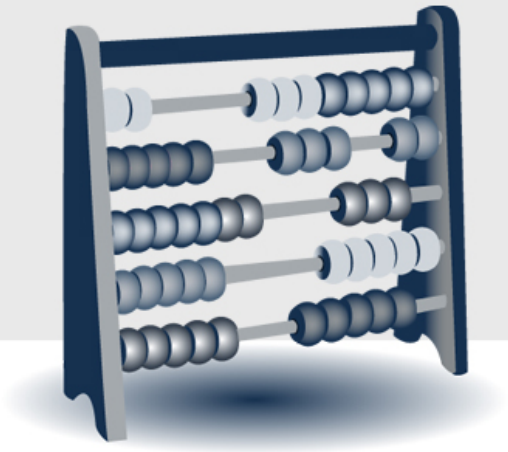
Big Ideas

- The Shifts in Common Core Standards - Mathematics
- Conceptual Understanding and Fluency
- How are changes reflected in the classroom?
- Standards for
- Mathematical Practice
- Help at Home



Common Core State Standards for Mathematics: Key Shifts

1. Focus: Focus strongly where the standards focus.



Shift #1: Focus Strongly where the Standards Focus

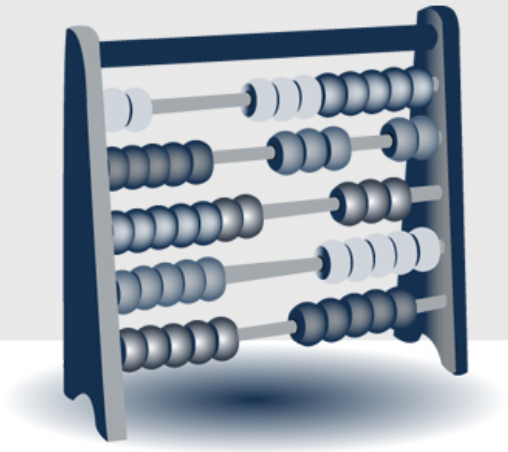
- Significantly narrow the scope of content and deepen how time and energy is spent in the math classroom.
- Focus deeply on what is emphasized in the standards, so that students gain strong foundations.

Key Areas of Focus in Mathematics

Grade	Focus Areas in Support of Rich Instruction and Expectations of Fluency and Conceptual Understanding
K–2	Addition and subtraction – concepts, skills, and problem solving and place value
3–5	Multiplication and division of whole numbers and fractions – concepts, skills, and problem solving
6	Ratios and proportional reasoning; early expressions and equations
7	Ratios and proportional reasoning; arithmetic of rational numbers
8	Linear algebra

Common Core State Standards for Mathematics: Key Shifts

1. Focus: Focus strongly where the standards focus.
2. Coherence: Think across, and link to major topics.

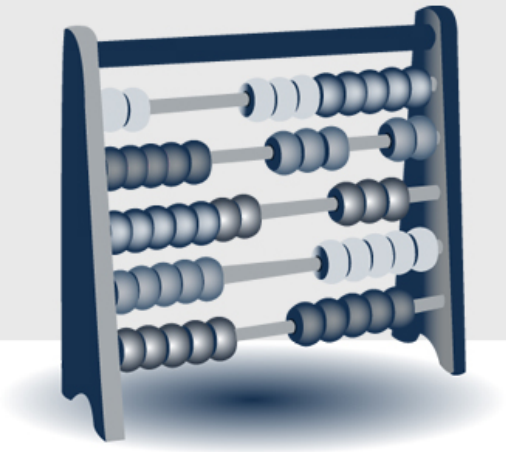


Shift #2: Coherence: Think Across Grades, and Link to Major Topics Within Grades

- Carefully connect the learning within and across grades so that students can build new understanding on foundations built in previous years.
- Begin to count on solid conceptual understanding of core content and build on it. Each standard is not a new event, but an extension of previous learning.

Common Core State Standards for Mathematics: Key Shifts

1. Focus: Focus strongly where the standards focus.
2. Coherence: **Think** across grades, and **link** to major topics.
3. Rigor: In **major topics, pursue** conceptual understanding, procedural skill and **fluency**, and **application**.



Shift #3: Rigor: In Major Topics, Pursue Conceptual Understanding, Procedural Skill and Fluency, and Application

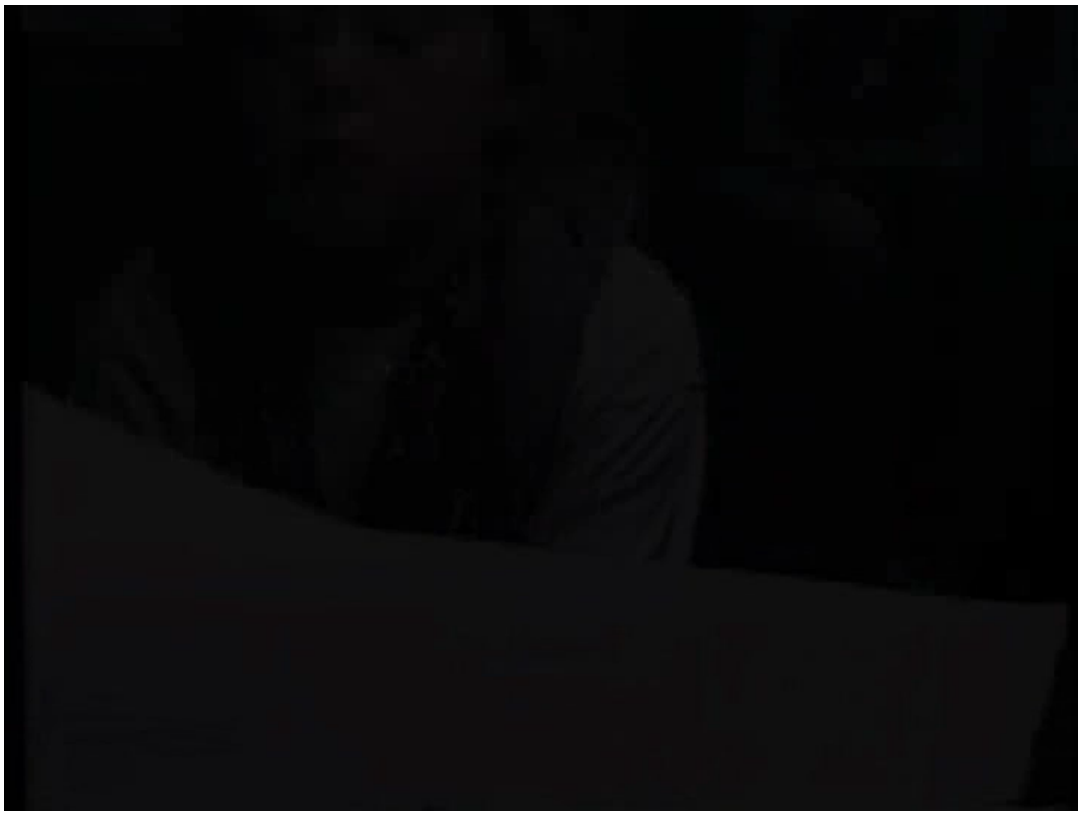
- The CCSS-M require a balance of:
  - Solid conceptual understanding
  - Procedural skill and fluency
  - Application of skills in problem solving situations
- Pursuit of all three requires equal intensity in time, activities, and resources.

Required Fluencies in K-6

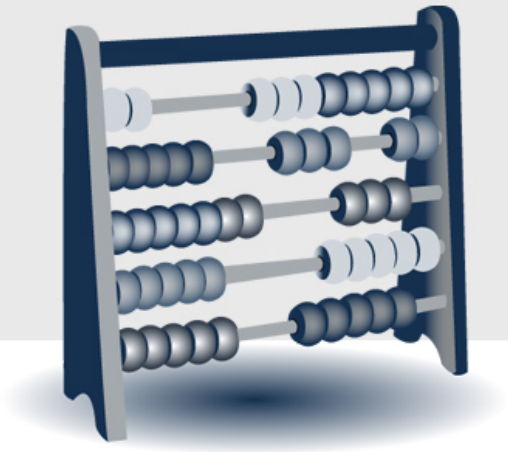
Grade	Standard	Required Fluency
K	K.OA.5	Add/subtract within 5
1	1.OA.6	Add/subtract within 10
2	2.OA.2 2.NBT.5	Add/subtract within 20 (know single-digit sums from memory) Add/subtract within 100
3	3.OA.7 3.NBT.2	Multiply/divide within 100 (know single-digit products from memory) Add/subtract within 1000
4	4.NBT.4	Add/subtract within 1,000,000
5	5.NBT.5	Multi-digit multiplication
6	6.NS.2,3	Multi-digit division Multi-digit decimal operations

Conceptual Understanding

What happens when a student learns a procedure before Understanding?

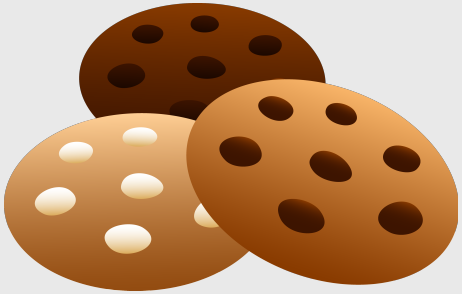


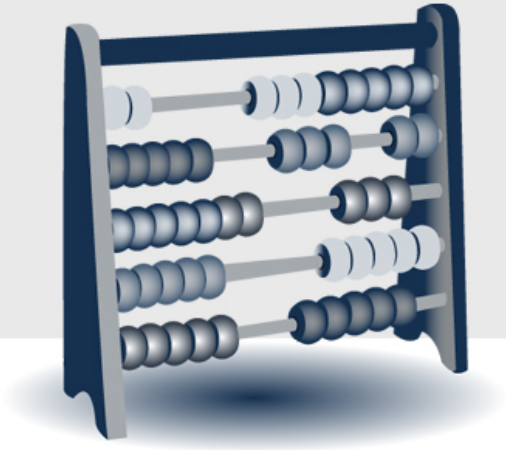
- How did you feel about word problems when you were in school?
- What made them hard or easy to you?



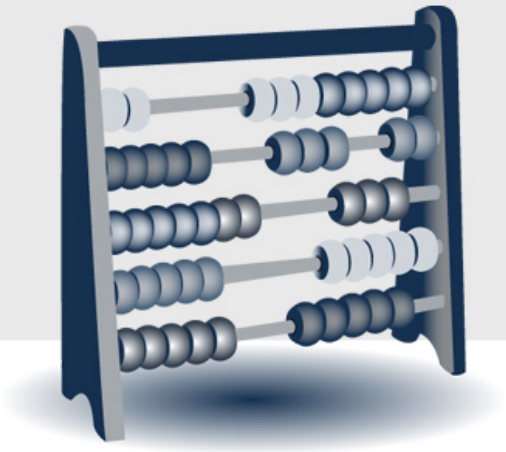
What does it look like in the classroom?

Mrs. Brown has 15½ cups of sugar. It takes ¾ cup of sugar to make a batch of cookies. If Mrs. Brown wants to use all of this sugar, how many batches of cookies can she make?



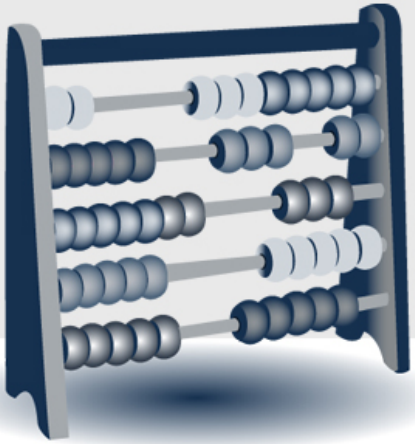


- Penny had a bag of marbles. She gave 1/3 of the marbles to Rebecca, and then ¼ of the marbles still in the bag to John. She then had 24 marbles left. How many marbles did Penny have to start with?



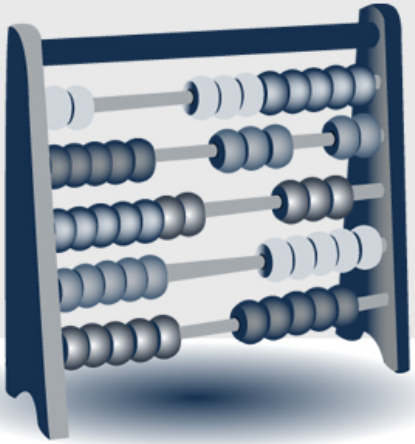
Rita – September of Third Grade

What does she understand?



Rita – May of Third Grade

What does Rita understand now?



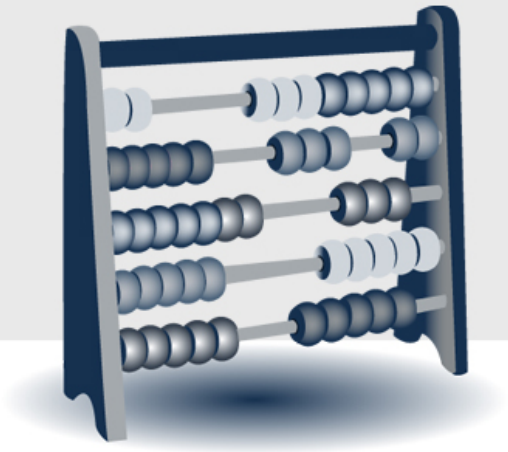
Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Supporting your student at home...

- Encourage mental math;
- Encourage estimation/prediction;
- Ask for explanations not just answers;
- Ask about their thinking, instead of giving answers;
- Encourage alternate strategies;
- Seek multiple solutions.

Questions



Resources

Dept. of Education resources for parents:

http://www.cde.ca.gov/re/cc/documents/ccssresourcesforparentsandguardians.pdf

Smarter Balanced Assessment Consortium practice tests:

http://sbac.portal.airast.org/practice-test/