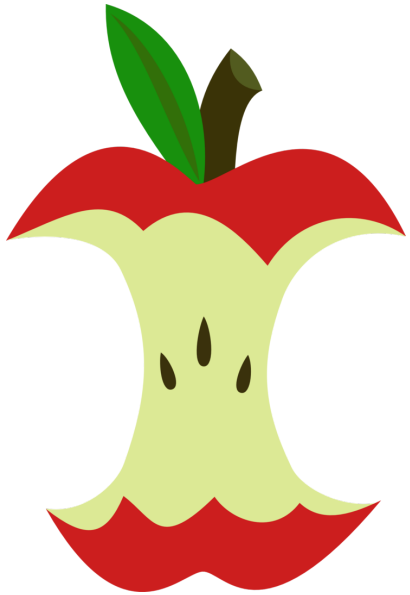
The Struggle for ALL is Real for ALL

Kansas Association of Teachers of Mathematics

Kansas College and Career Ready Standards For Mathematics



Chris Shore
The Math Projects Journal
Temecula Valley USD, CA

shore@mathprojects.com
mathprojects.com/presentations

@MathProjects
#KATM16
#thestruggleisreal

MPJ

YOUR 21st Century Classroom

engage^ny

Shifts in Mathematics		
Shift 1	Focus	Teachers significantly narrow and deepen the scope of how time and energy is spent in the math classroom. They do so in order to focus deeply on only the concepts that are prioritized in the standards.
Shift 2	Coherence	Principals and teachers carefully connect the learning within and across grades so that students can build new understanding onto foundations built in previous years.
Shift 3	Fluency	Students are expected to have speed and accuracy with simple calculations; teachers structure class time and/or homework time for students to memorize, through repetition, core functions.
Shift 4	Deep Understanding	Students deeply understand and can operate easily within a math concept before moving on. They learn more than the trick to get the answer right. They learn the math.
Shift 5	Application	Students are expected to use math and choose the appropriate concept for application even when they are not prompted to do so.
Shift 6	Dual Intensity	Students are practicing and understanding. There is more than a balance between these two things in the classroom – both are occurring with intensity.

EdLeader21

The Four C's
Critical Thinking
Communication
Collaboration
Creativity

Smarter Balanced Assessment Consortium

The Four Claims
Concepts & Procedures
Problem Solving
Communicate Reasoning
Modeling & Data Analysis

Mathematical Practices

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.

COMMON CORE
STATE STANDARDS INITIATIVE

The Clothesline

Name: _____
Date: _____

For each set, record the given values, expressions or drawings. After the discussion of their placement on the clothesline, record them on the number line.

1. _____, _____, _____

2. _____, _____, _____

3. _____, _____, _____

4. _____, _____, _____

Grade 3 Operational Mathematics Performance Task 2016

Mr. Wilson has 4 buckets of blocks in his classroom. In each bucket are

7 yellow blocks,
4 blue blocks,
3 red blocks, and
1 green block.

1. What is the **total** number of each color of blocks in the classroom?

2. How many more yellow blocks than red blocks are in the classroom?

3. The weight of all of the blue blocks in one bucket is 32 ounces (oz). What is the weight of one blue block, in oz?

Mr. Wilson brings 6 empty buckets into his classroom. He tells his students to divide **all** of the blocks evenly among **all** of the buckets, in any mix of colors.

4. After the students divide the blocks evenly among all of the buckets, how many blocks are in each bucket?

5. While the students are dividing the blocks evenly among the buckets, they find that **all** of the blocks of one color will fit into one bucket. Which blocks?

6. Mr. Wilson now has a total of 12 buckets. Each bucket can hold up to 15 blocks. With an equal number of blocks of any mix of colors in each bucket, how many buckets can hold **all** of the blocks? Give three possible answers.

Mr. Green's class is using different activities to study the environment. He placed his students into groups that are making posters, recycling cans, and planting trees. The chart shows how the students are divided into groups.

Activity	**Fraction of Class**
Making posters	$\frac{5}{12}$
Recycling cans	$\frac{1}{4}$
Planting trees	$\frac{1}{3}$

---

1. Order the groups from least to greatest number of students, starting with the least number on the left.

making posters | recycling cans | planting trees

2. The class has 24 students. How many students are in the group that is making posters?

3. The group making posters has a roll of paper that is 119 inches (in.) long. The group makes 6 posters of equal length and makes the largest posters possible with whole number side lengths. What is the length of each poster?

4. The chart shows the total weight of cans in pounds (lb) collected by three of the group's members.

Name	Weight of Cans Collected (lb)
Matt	0.78
Nick	0.8
Patty	0.09

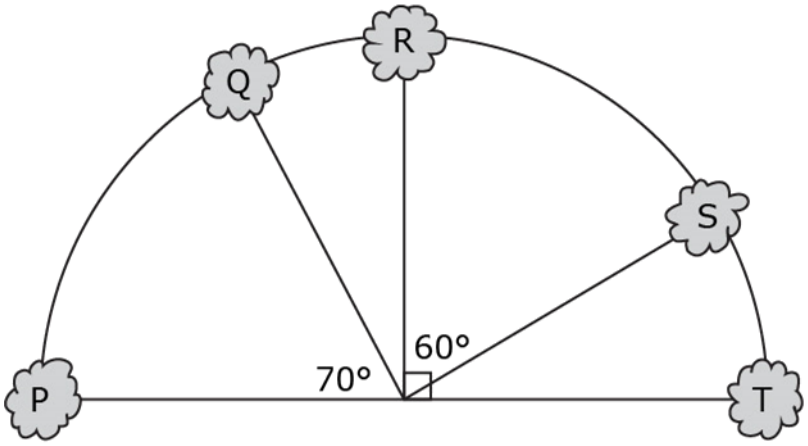
	>	<	=
m [ ] *n*			
n [ ] *p*			
p [ ] *m*			

Let *m* be the weight of cans Matt collected. Let *n* be the weight of cans Nick collected. Let *p* be the weight of cans Patty collected.

Choose the correct symbol to complete each statement. Symbols may be used more than once or not at all.

5. The group planting trees will plant them in a garden that is a semicircle. The shapes P, Q, R, S, and T represent the trees. The spacing between the trees is shown in the picture.

What is the angle between tree Q and tree T?



Grade 5 Operational Mathematics Performance Task 2016

1. A package of paper measures 11 inches (in.) long, 8.5 in. wide, and 2 in. high.

1a. What is the volume of 1 package of paper in cubic inches (in^3), rounded to the nearest hundred?

1b. Packages of paper are shipped in boxes. Each box contains 2 rows of 5 packages. What is the volume of 1 box of paper, in cubic inches (in^3), rounded to the nearest thousand?

2. A cart is used to deliver boxes of paper to stores. The cart holds a maximum of 220 pounds (lb). Each box weighs 1 lb per 50 in^3. How many boxes can the cart hold?

3. A store buys boxes of paper for $30 per box. How much does 1 package of paper cost the store?

4. The store sells paper for $1\frac{1}{2}$ times the price it pays. What is the store's profit on each box of paper it sells, in dollars?