

An Update on the Common Core: K-6 Math

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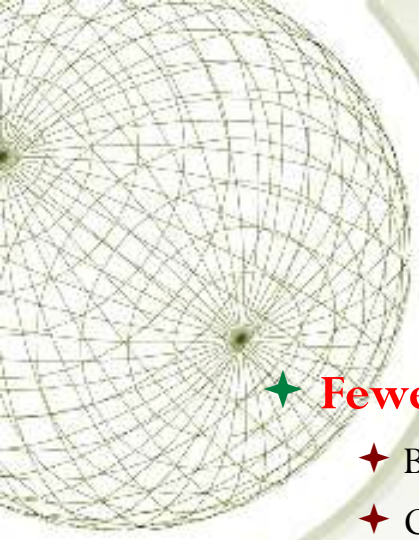
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Preparing for the Common Core in 3 steps

- ★ Know the content
 - ★ Standards, practices, and progressions
- ★ Use Technology
 - ★ Engage, motivate, and assess
- ★ Review Assessment Sample Items

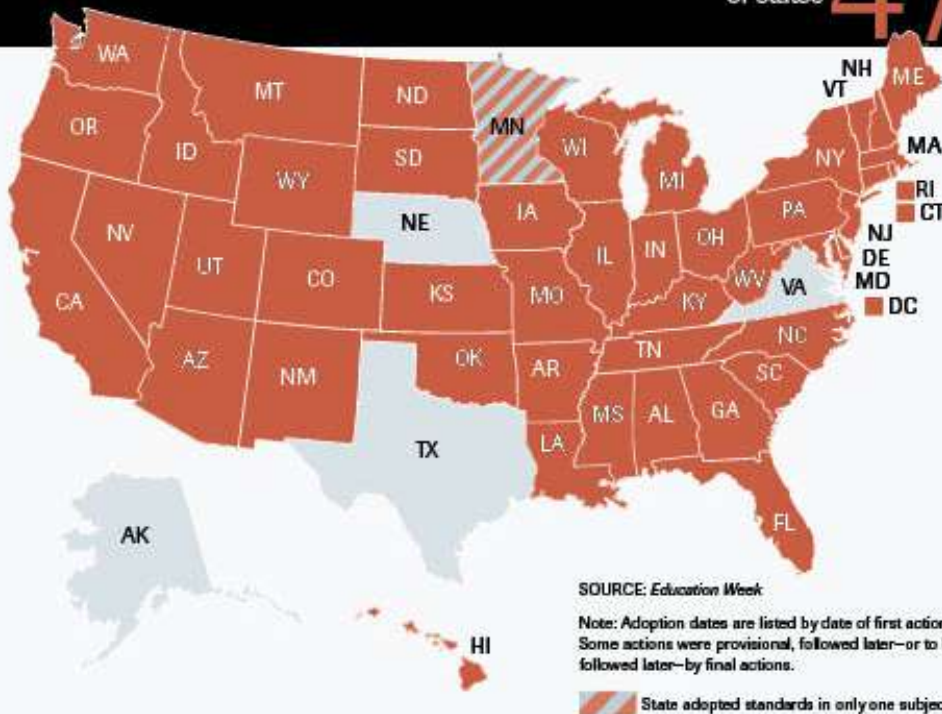


Common Core State Standards: Let's not just drink the Kool-Aid.

- ◆ **Fewer, clearer, and higher**, to best drive effective policy and practice;
 - ◆ But definitely not fewer for grades 9-12!
 - ◆ Clearer? Have you read these things?
- ◆ Aligned with **college and work expectations**, so that all students are prepared for success upon graduating from high school;
 - ◆ Does math for college = math for work?
- ◆ Inclusive of **rigorous** content and application of knowledge through high-order skills, so that all students are prepared for the 21st century;
- ◆ **Internationally benchmarked**, so that all students are prepared for succeeding in our global economy and society; and
 - ◆ Singapore. Singapore. Singapore.
- ◆ **Research** and evidence-based.
 - ◆ The research they liked.

Common-Core Adoptions

Number of states **47**



FEBRUARY 2010

10 Kentucky

MAY

12 West Virginia

20 Hawaii

25 Maryland

JUNE

2 Wisconsin

3 North Carolina

4 Utah

7 Ohio

15 Michigan

15 Missouri

16 New Jersey

16 Wyoming

18 Nevada

24 Illinois

24 Oklahoma

25 Mississippi

28 Arizona

JULY

1 Louisiana

1 Pennsylvania

1 Rhode Island

7 Connecticut

8 Georgia

8 New Hampshire

12 Arkansas

14 South Carolina

19 New York

19 Washington

21 Massachusetts

21 Washington, D.C.

27 Florida

29 Iowa

30 Tennessee

AUGUST

2 Colorado

2 California

3 Indiana

17 Vermont

19 Delaware

SEPTEMBER

27 Minnesota

OCTOBER

12 Kansas

19 New Mexico

28 Oregon

NOVEMBER

17 Idaho

18 Alabama

29 South Dakota

APRIL 2011

1 Maine

JUNE

13 North Dakota

NOVEMBER

4 Montana



of K-12 public school students in the U.S. now live in states that have adopted the common standards.



Implementation of the Common Core State Standards in New Jersey

- ◆ Adopted by NJ State Board June 16, 2010
- ◆ <http://www.corestandards.org>
- ◆ Implementation Schedule:

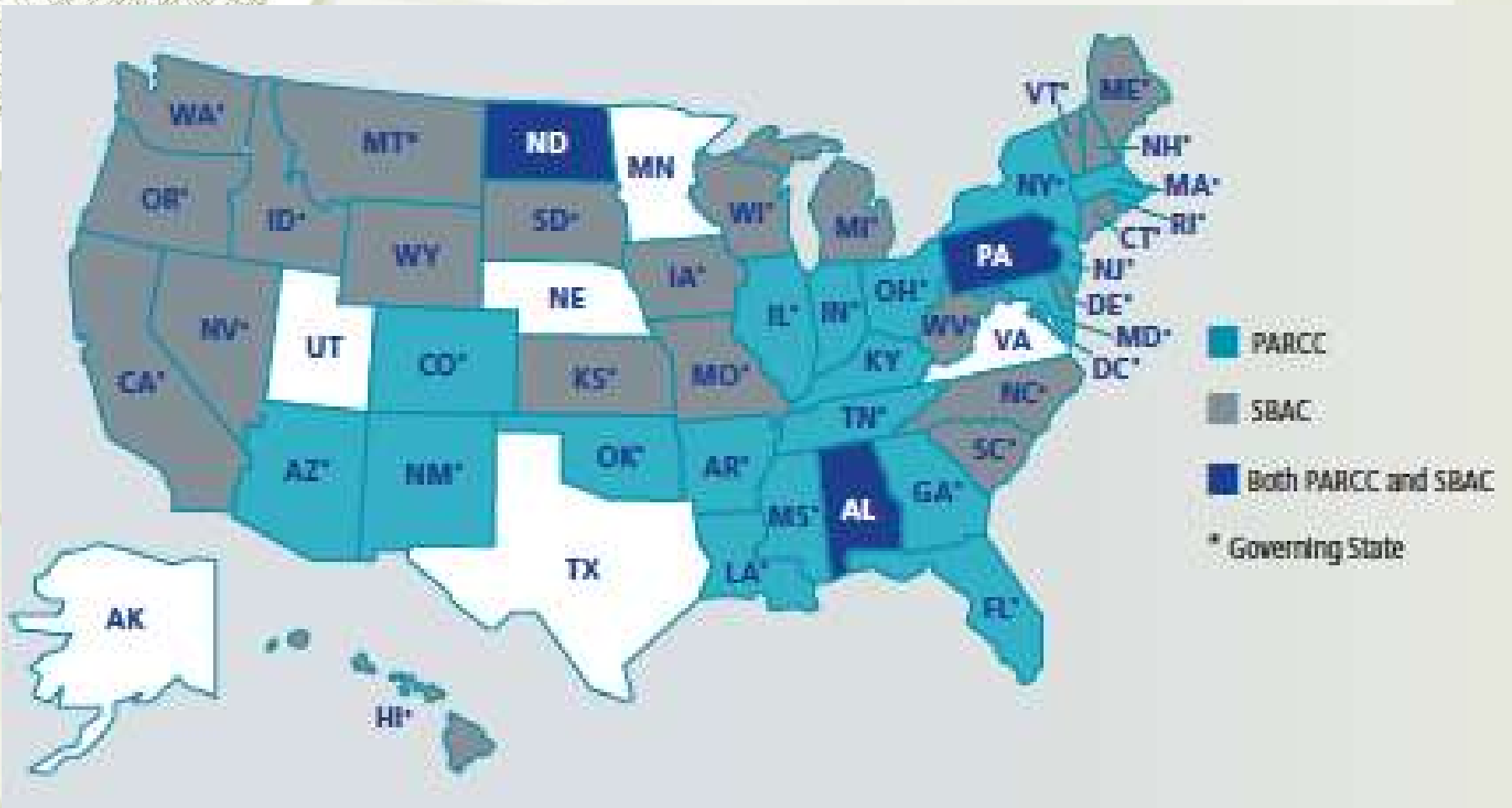
	ELA	Mathematics
2011-2012		K-2
2012-2013	K-12	3-5, HS
2013-2014		6-8
2014-2015	National Assessment	



National Assessments 2014-15

- ▶ Partnership for Assessment of Readiness for College and Careers (PARCC)
 - ▶ 19 states + DC, Achieve
- ▶ SMARTER Balanced Assessment Consortium (SBAC)
 - ▶ 22 states, West Ed
- ▶ 3 states undecided, 1 (Utah) lost interest
- ▶ 5 states did not adopt the common core

PARCC and SBAC





PARCC & SBAC

- ★ Online assessments for Grades 3-8 and high school
- ★ Use of a mix of item types, including selected response, constructed response, technology enhanced and complex performance tasks.
- ★ Two components, both given during final weeks of the school year.
- ★ Use of both electronic and human scoring, with results expected within two weeks.

Key Similarities

Summative Assessments:

- Online assessments for Grades 3-8 and high school in ELA and mathematics.
- Use of a mix of item types, including selected response, constructed response, technology-enhanced and complex performance tasks.
- Two components, both given during final weeks of the school year.
- Use of both electronic and human scoring, with results expected within two weeks.

Other Assessments, Resources, and Tools:

- Optional interim assessments
- Professional development modules
- Formative items/tasks for classroom use
- Model curricular/instructional units
- Online reporting suite
- Digital library for sharing vetted resources and tools.

Cost Estimates:

- Approximately \$20 per pupil per year for all summative assessment components

Key Differences

PARCC

Smarter Balanced

Summative Assessments

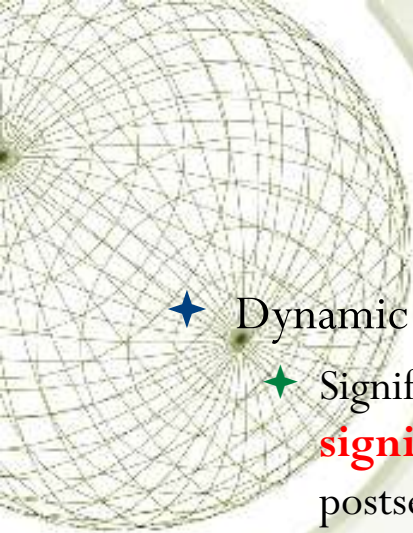
- Fixed-form delivery (students take one of several fixed, equated sets of items and tasks)

- Adaptive delivery (students see an individually tailored set of items and tasks)
- A retake option is available for the end-of-year component

Other Assessments, Resources and Tools

- Optional – One Diagnostic and one Mid-year assessment, with the latter made up primarily of tasks similar to the summative performance-based tasks. Available for Grades 3-8 and high school.
- Optional – K-2 formative performance tasks.
- Required – Non-summative speaking and listening assessment for Grades 3-8 and high school, locally scored.

- Optional – Interim assessments for Grades 3-12 will be computer adaptive and have multiple item types, including performance tasks. The number, timing and scope (all standards or clusters of standards) can be locally determined.



Three other consortiums

www.k12center.org

- ★ Dynamic Learning Maps (DLM)

- ★ Significantly improve the academic outcomes of students with the **most significant cognitive disabilities**, thereby improving their preparedness for postsecondary options and the world of work. The assessment system will be designed to provide useful, timely diagnostic information and strong instructional support to teachers through a highly customizable system of instructionally embedded and end-of-year assessments.

- ★ National Center and State Collaborative (NCSC)

- ★ A comprehensive system that addresses the curriculum, instruction, and assessment needs of students with the **most significant cognitive disabilities** by: producing technically defensible summative assessments; incorporating evidence-based instruction and curriculum models; and developing comprehensive approaches to professional development delivered through state-level Communities of Practice.

- ★ Assessment Services Supporting ELS through Technology Systems (ASSETS)

- ★ The ASSETS Consortium will develop a next generation, technology-based language assessment system for students in **grades K–12 who are learning English.**



Sample Released items

- ★ <http://www.parcconline.org>
- ★ <http://www.smarterbalanced.org>
- ★ Balanced Assessment Project
 - ★ <http://balancedassessment.concord.org>
- ★ Mathematics Assessment Project (MAP)
 - ★ <http://map.mathshell.org/>



Big Ideas

- ★ Elementary K-2: Place Value & 10
- ★ Grades 3-5+: Fractions!
- ★ Grades 6-8: Algebra
- ★ High School: Modeling
 - ★ Modeling links classroom mathematics and statistics to everyday life, work, and decision-making.

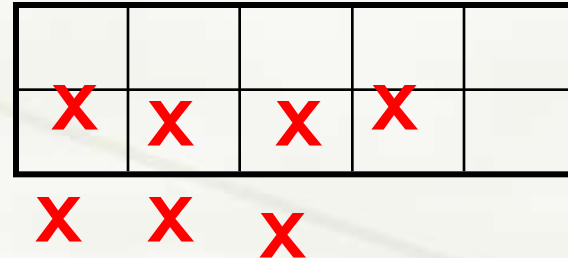
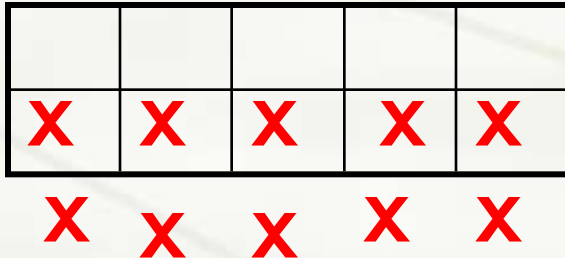
Key Fluencies

Grade	Required Fluency
K	Add/subtract within 5
1	Add/subtract within 10
2	Add/subtract within 20 Add/subtract within 100 (pencil and paper)
3	Multiply/divide within 100 Add/subtract within 1000
4	Add/subtract within 1,000,000
5	Multi-digit multiplication
6	Multi-digit division Multi-digit decimal operations
7	Solve $px + q = r$, $p(x + q) = r$
8	Solve simple 2×2 systems by inspection

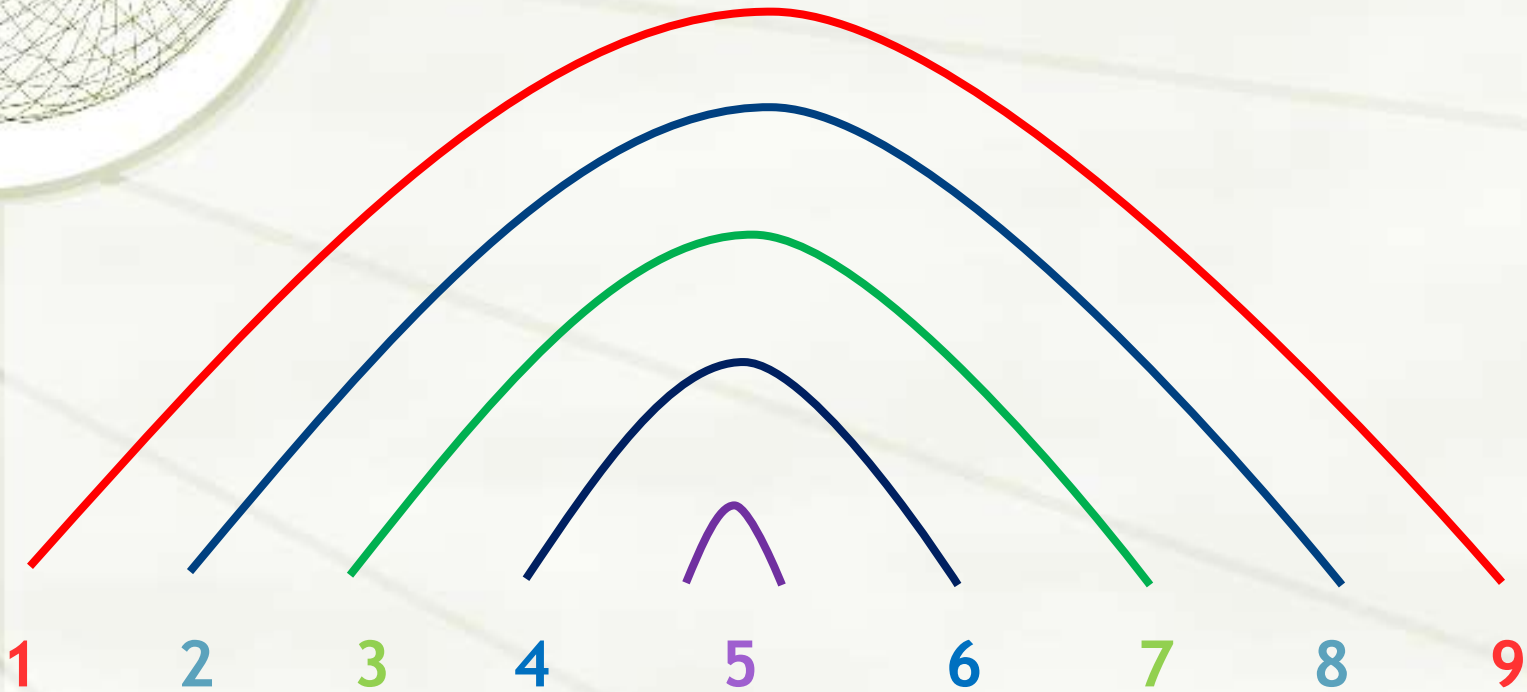
The Importance of Ten

◆ $8 + 7 = ?$

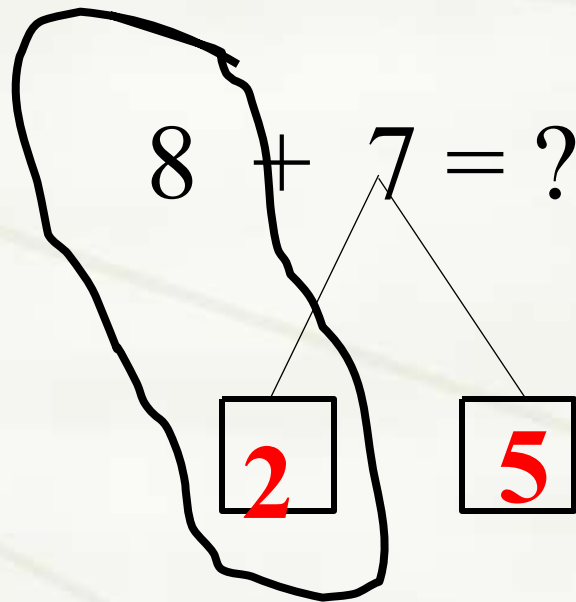
◆ How do we teach this?



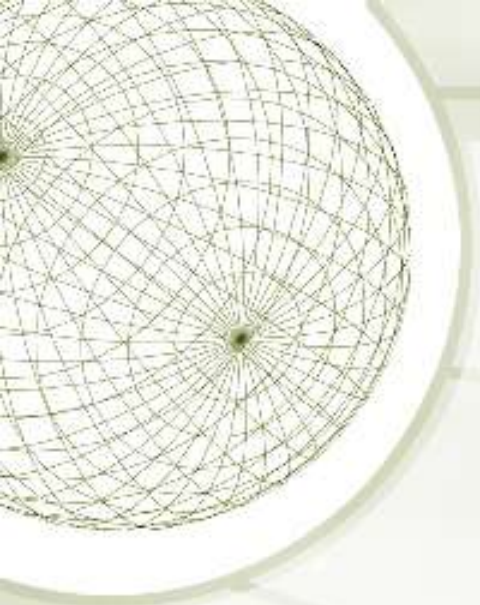
Best Friends




$$8 + 7 = ?$$



$$10 + 5 = 15$$



$$17 - 8 =$$

$$\begin{array}{r} 0 \ 17 \\ 1 \ 7 \\ - \ 8 \end{array}$$

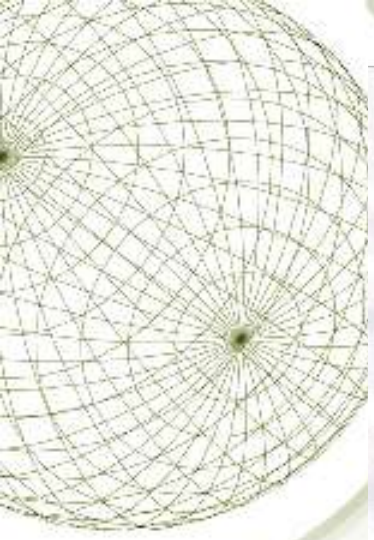
$$- \ 8$$

2

7

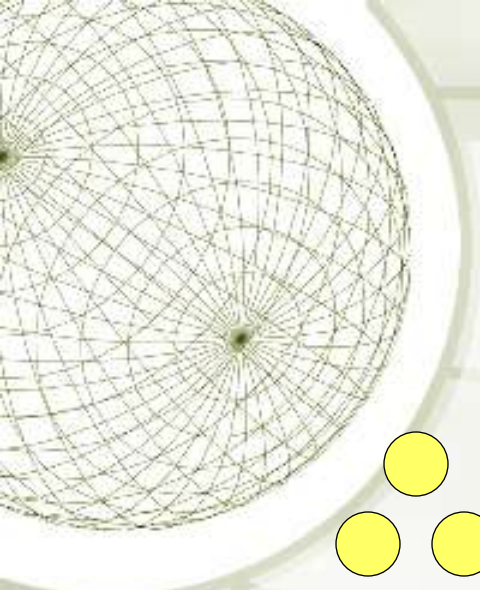
8 ---> ---> 10 ---> ---> ---> ---> ---> ---> --->

17

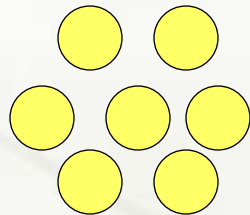
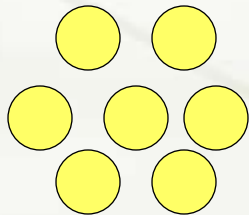
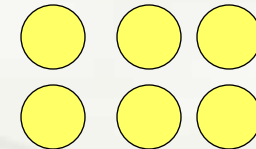
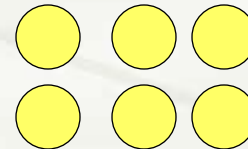
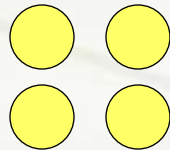
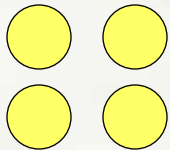
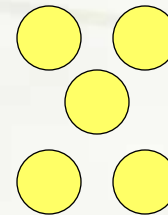
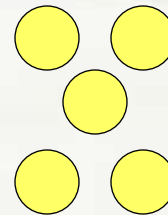
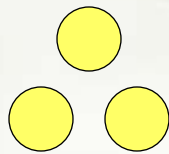
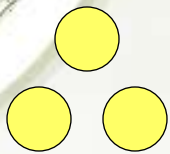


One seven-year-old student's
viewpoint of life at 100

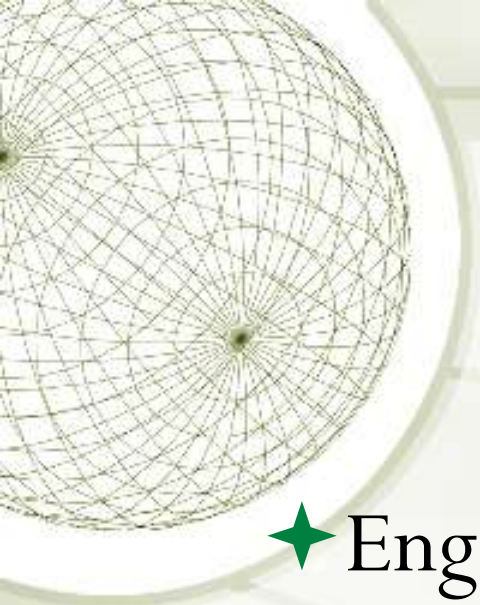
If I were 100 years old
~~~~~  
If I were 100 years old,  
I would go to a nursing  
home. I would stay  
there until I was dead.  
By the time I was 100,  
I would know Regrouping  
with subtraction and  
then I would die happy.



# How Many Circles?



5  
0



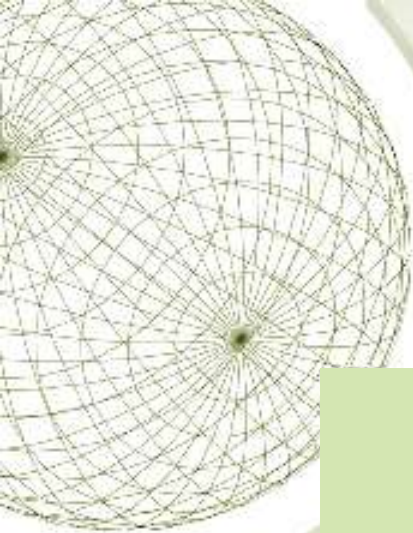
*More time on computation  
but not the same old way*

★ Engaging & Active

★ [Arcademicskillbuilders.com](http://Arcademicskillbuilders.com)

★ [Sumdog.com](http://Sumdog.com)

★ Less passive worksheets



# *The Influence of Video Games*

**IF PEOPLE WERE INFLUENCED  
BY VIDEO GAMES,  
THEN THE MAJORITY OF  
FACEBOOK USERS  
WOULD BE FARMERS  
BY NOW.**

# Kindergarten Scope & pacing

| Unit Title                                           | Pacing  | Standards                                                             |
|------------------------------------------------------|---------|-----------------------------------------------------------------------|
| 1. Counting and Matching Numerals 0-5 with Comparing | 4 weeks | K.CC.1 K.CC.3 K.CC.4 K.CC.5 K.CC.6 K.CC.7 K.MD.3                      |
| 2. Counting and Match Numerals 6-10 with Comparing   | 3 weeks | K.CC.1 K.CC.3 K.CC.4 K.CC.5 K.CC.6 K.CC.7 K.MD.3                      |
| 3. Counting & Matching Numerals 11 - 20              | 4 weeks | K.CC.1 K.CC.2 K.CC.3 K.CC.4 K.CC.5                                    |
| 4. Fluency with Add & Subt. within 5                 | 4 weeks | K.CC.1 K.CC.2 K.CC.3 K.CC.4 K.CC.5 K.OA.1 K.OA.2 K.OA.3 K.OA.5        |
| 5. Exploring Add & Subt. within 10                   | 4 weeks | K.CC.1 K.CC.2 K.CC.3 K.CC.4 K.CC.5 K.OA.1 K.OA.2 K.OA.3 K.OA.4 K.OA.5 |
| 6. Teen Numbers (11-19) & Counting to 100            | 4 weeks | K.CC.1 K.CC.2 K.CC.4 K.CC.5 K.OA.1 K.NBT.1                            |
| 7. Identify and Describe 2-D and 3-D Shapes          | 2 weeks | K.MD.3 K.G.1 K.G.2 K.G.3 K.G.4 K.G.5                                  |
| 8. Compare, Analyze, and Compose 2-D and 3-D Shapes  | 2 weeks | K.MD.2 K.G.1 K.G.2 K.G.3 K.G.4 K.G.5 K.G.6                            |
| 9. Measurement by Direct Comparison                  | 4 weeks | K.MD.1 K.MD.2                                                         |

# Grade 1

| Unit Title                                                | Pacing         | Standards                                                                                        |
|-----------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------|
| <b>1. Fluency with Addition and Subtraction within 10</b> | <b>5 weeks</b> | <b>1.OA.1 1.OA.4 1.OA.8<br/>1.OA.2 1.OA.5 1.NBT.1<br/>1.OA.3 1.OA.5 1.MD.4<br/>1.OA.4 1.OA.7</b> |
| <b>2. Exploring Addition &amp; Subtraction within 20</b>  | <b>3 weeks</b> | <b>1.OA.1 1.OA.4 1.OA.8<br/>1.OA.2 1.OA.5 1.NBT.1<br/>1.OA.3 1.OA.5 1.MD.4<br/>1.OA.4 1.OA.7</b> |
| <b>3. Counting and Place Value</b>                        | <b>5 weeks</b> | <b>1.NBT.1 1.NBT.3 1.MD.4<br/>1.NBT.2 1.NBT.5</b>                                                |
| <b>4. Exploring Addition &amp; Subtraction within 100</b> | <b>5 weeks</b> | <b>1.OA.3 1.NBT.1 1.NBT.4<br/>1.OA.5 1.NBT.2 1.NBT.6<br/>1.OA.7</b>                              |
| 5. Defining Attributes of 2-D and 3-D Shapes              | 2 weeks        | 1.G.1<br>1.G.2                                                                                   |
| 6. Partitioning Circles and Rectangles                    | 2 weeks        | 1.G.3                                                                                            |
| 7. Measuring Length with Non-Standard Units               | 2 weeks        | 1.MD.1<br>1.MD.2                                                                                 |
| 8. Time to the Hour and Half-Hour                         | 2 weeks        | 1.MD.3<br>1.G.3                                                                                  |



# Grade 2

| Unit Title                                                   | Pacing         | Standards                                                     |
|--------------------------------------------------------------|----------------|---------------------------------------------------------------|
| <b>1. Fact Strategies (+,-) Up to 20</b>                     | <b>2 weeks</b> | 2.OA.1<br>2.OA.2<br>2.NBT.9                                   |
| <b>2. Place Value to 1,000</b>                               | <b>4 weeks</b> | 2.NBT.1 2.NBT.2<br>2.NBT.4 2.NBT.3                            |
| <b>3. Fluency with Addition &amp; Subtraction within 100</b> | <b>3 weeks</b> | 2.NBT.5 2.NBT.6<br>2.NBT.9 2.MD.5<br>2.NBT.1 2.MD.6<br>2.OA.1 |
| <b>4. Exploring Addition &amp; Subtraction within 1000</b>   | <b>3 weeks</b> | 2.NBT.8<br>2.NBT.9<br>2.NBT.1<br>2.NBT.7                      |
| 5. Money                                                     | 3 weeks        | 2.MD.8                                                        |
| 6. Reasoning with Shapes                                     | 2 weeks        | 2.G.1<br>2.G.3                                                |
| 7. Linear Measurement with Standard Units                    | 3 weeks        | 2.MD.1 2.MD.2<br>2.MD.3 2.MD.4                                |
| 8. Time to the Nearest 5-Minutes                             | 2 weeks        | 2.MD.7<br>2.NBT.2<br>2.G.3                                    |
| 9. Representing, Analyzing & Interpreting Data               | 2 weeks        | 2.OA.1<br>2.MD.9<br>2.MD.10                                   |
| <b>10. Exploring Multiplication</b>                          | <b>2 weeks</b> | 2.NBT.2<br>2.G.2<br>2.OA.3<br>2.OA.4                          |

# Grade 3 Pacing

| Unit Title                                              | Pacing         | Standards                                          |
|---------------------------------------------------------|----------------|----------------------------------------------------|
| 1. Understanding Multiplication and Division            | <b>3 weeks</b> | 3.OA.1<br>3.OA.2<br>3.MD.3                         |
| 2. Connecting and Using Multiplication and Division     | <b>5 weeks</b> | 3.OA.3 3.OA.6<br>3.OA.4 3.OA.7<br>3.OA.5           |
| 3. Computing with Whole Numbers                         | <b>4 weeks</b> | 3.OA.7 3.NBT.1<br>3.OA.8 3.NBT.2<br>3.OA.9 3.NBT.3 |
| 4. Exploring Measurement and Data                       | 3 weeks        | 3.MD.1<br>3.MD.2<br>3.MD.3<br>3.MD.4               |
| 5. Understanding Area and Perimeter                     | 4 weeks        | 3.MD.5<br>3.MD.6<br>3.MD.7<br>3.MD.8               |
| 6. Reasoning about Two-dimensional Shapes               | 3 weeks        | 3.MD.8<br>3.G.1<br>3.G.2                           |
| 7. Understanding Fractions                              | <b>3 weeks</b> | 3.NF.1<br>3.NF.2                                   |
| 8. Reasoning about Fraction Comparisons and Equivalence | <b>3 weeks</b> | 3.NF.3<br>3.G.2                                    |



### *3.NF - Assessment Item*

- ★ Which is closer to 1 on the number line,  $\frac{4}{5}$  or  $\frac{5}{4}$ . Explain.
- ★ This can be seen as a multi-step problem for grade 3:
  - ★ Compare  $\frac{4}{5}$  to  $\frac{5}{5}$  (like denominators)
  - ★ Compare  $\frac{4}{4}$  to  $\frac{5}{4}$  (like denominators)
  - ★ Compare  $\frac{1}{4}$  to  $\frac{1}{5}$  (like numerators)

**Part A**

A farmer plants  $\frac{3}{4}$  of the field with soybeans.  
Drag the soybean to the field as many times as needed to show the fraction of the field that is planted with soybeans.

**Part B**

Type a fraction different than  $\frac{3}{4}$  in the boxes that also represents the fractional part of the farmer's field that is planted with soybeans.

$$\frac{\boxed{3}}{\boxed{4}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

Explain why the two fractions above are equal.

**Farmer's Fields**

Soybean

# Pacing Guide – Grade 4

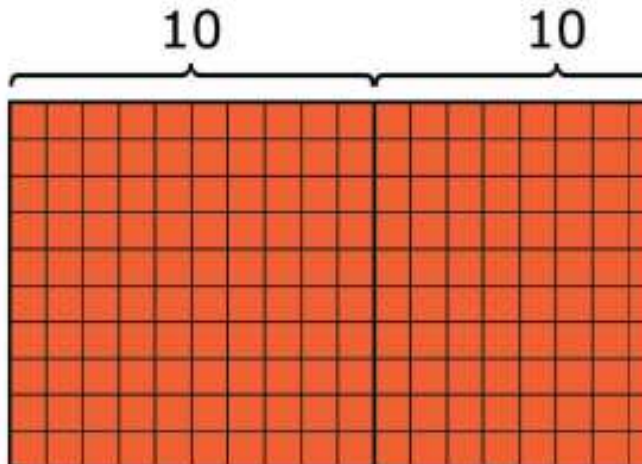
| Unit Title                                                                          | Pacing  | Standards                                           |
|-------------------------------------------------------------------------------------|---------|-----------------------------------------------------|
| 1. Understanding and Using Place Value to Multiply and Divide                       | 5 weeks | 4.NBT.1<br>4.NBT.5<br>4.NBT.2<br>4.NBT.6<br>4.NBT.3 |
| 2. Factors and Multiples                                                            | 2 weeks | 4.OA.1<br>4.OA.4<br>4.OA.5                          |
| 3. Multi-Digit Whole Number Computation                                             | 3 weeks | 4.OA.2<br>4.OA.3<br>4.NBT.4                         |
| 4. Comparing Fractions and Understanding Decimal Notation                           | 4 weeks | 4.NF.1<br>4.NF.6<br>4.NF.2<br>4.NF.7<br>4.NF.5      |
| 5. Building Understanding of Addition, Subtraction, and Multiplication of Fractions | 6 weeks | 4.NF.3<br>4.NF.4<br>4.MD.4                          |
| 6. Solving Problems involving Measurement & Data                                    | 3 weeks | 4.MD.1<br>4.MD.2<br>4.MD.3                          |
| 7. Exploring Angles and Angle Measurement                                           | 2 weeks | 4.MD.5<br>4.MD.6<br>4.MD.7                          |
| 8. Understanding Properties of Two-Dimensional Figures                              | 3 weeks | 4.OA.5 4.G.2<br>4.G.1 4.G.3                         |

A multiplication problem is shown below.

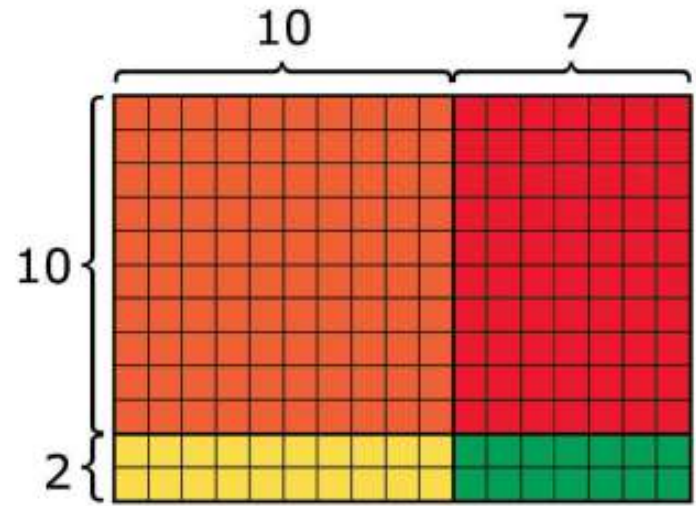
$$\begin{array}{r} 17 \\ \times 12 \\ \hline \end{array}$$

Which model(s) below could represent the solution problem? Click the letter next to all that apply

(A)



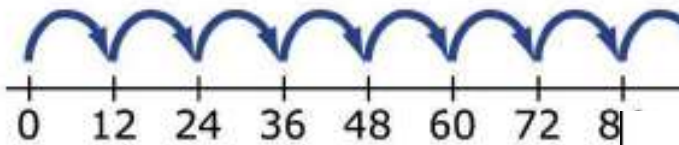
(D)



$$(17 \times 2) + (17 \times 1)$$

(E)

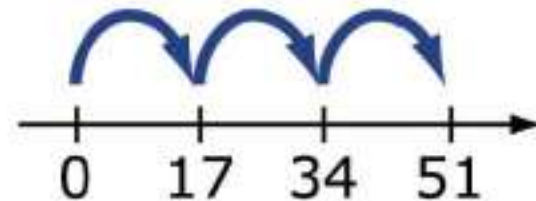
(B)



(C)

$$(1 \times 1) + (1 \times 7) + (2$$

(F)



# 4.NBT.5

Sort these four shapes. Use the characteristics labeled in the boxes below. Some shapes may belong in more than one box.



Rectangle



Rhombus



Right Triangle



Square

Click on a shape and then click inside a box to place the shape in the box. Continue as many times as necessary.

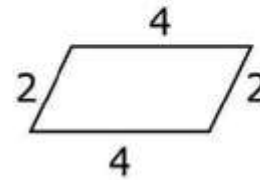
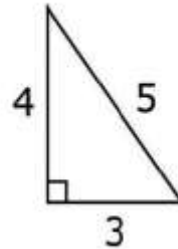
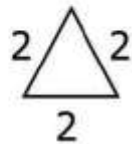
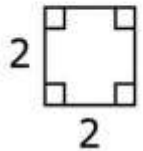
**Shapes with at Least One Right Angle**

**Shapes with at Least One Pair of Perpendicular Sides**

**Shapes with at Least One Pair of Parallel Sides**

# 4.G.3

Each shape below has side lengths labeled in units. Determine the number of lines of symmetry for each shape. Put each shape in the correct box. Some boxes may have more than one shape. Some boxes may not have any shapes.



To place a shape in a box, click the shape, move the pointer over the box, and click again. To return all shapes to their original positions, click the Reset button.

| Number of Lines of Symmetry | 0 | Only 1 | Exactly 2 | Exactly 3 | Exactly 4 | More Than 4 |
|-----------------------------|---|--------|-----------|-----------|-----------|-------------|
| Shape                       |   |        |           |           |           |             |



# Pacing Guide – Grade 5

## Grade 5 Pacing Guide

| Unit Title                                                      | Pacing         | Standards                                    |
|-----------------------------------------------------------------|----------------|----------------------------------------------|
| 1. Understanding the Place Value System                         | <b>4 weeks</b> | 5.NBT.1<br>5.NBT.2<br>5.NBT.3                |
| 2. Computing with Whole Numbers and Decimals                    | <b>3 weeks</b> | 5.NBT.5<br>5.NBT.6<br>5.NBT.7                |
| 3. Algebraic Connections                                        | <b>3 weeks</b> | 5.OA.1    5.G.1<br>5.OA.2    5.G.2<br>5.OA.3 |
| 4. Addition and Subtraction of Fractions                        | <b>4 weeks</b> | 5.NF.1<br>5.NF.2<br>5.MD.2                   |
| 5. Making Sense of Multiplication of Fractions                  | <b>4 weeks</b> | 5.NF.3<br>5.NF.4<br>5.NF.5<br>5.NF.6         |
| 6. Understanding Division of a Unit Fraction and a Whole Number | <b>3 weeks</b> | 5.NF.7                                       |
| 7. Classifying 2-Dimensional Figures                            | 3 weeks        | 5.G.3<br>5.G.4                               |
| 8. Exploring Volumes of Solid Figures                           | 4 weeks        | 5.MD.3<br>5.MD.4<br>5.MD.5                   |

Gregory is installing tile on a rectangular floor.

- He is using square tiles.
- The length of a side of each tile is  $\frac{1}{2}$  foot.

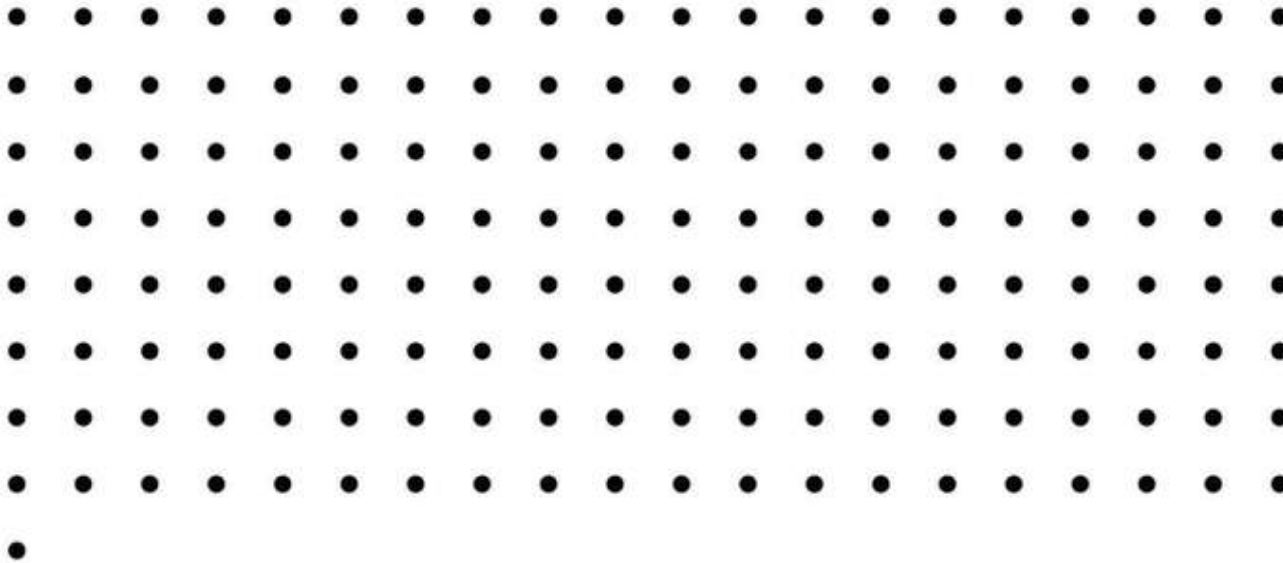
*5.NF.4 and 6*



Click on the square tile and then click anywhere in the grid to place a copy of the tile on the grid. Continue as many times as necessary.



Click on a tile in the grid and then click on the trash can to remove extra tiles.



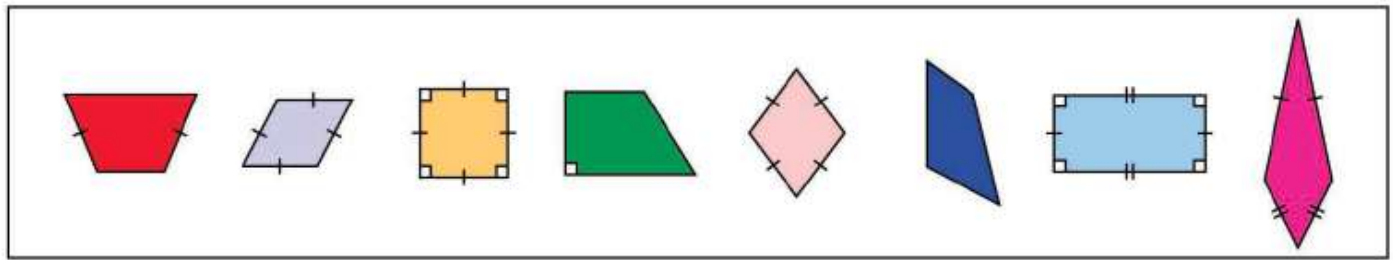
What is the **length**, in feet, of the floor?

Classify each shape according to its sides and angles. All shapes must be placed in at least one box.

- If a shape isn't a square, rectangle, rhombus, or parallelogram, then place it in the box labeled "Other."
- If a shape meets the properties of more than one category, it must be placed into the boxes of all the types of shapes it can be classified as.

*and 4*

**Shapes**



| Square | Rectangle | Rhombus | Parallelogram | Other |
|--------|-----------|---------|---------------|-------|
|        |           |         |               |       |

Classify each product below as less than  $\frac{5}{8}$ , equal to  $\frac{5}{8}$ , or greater than  $\frac{5}{8}$  by moving each expression to the correct box.

$$\frac{5}{8} \times \frac{1}{4}$$

$$\frac{5}{8} \times \frac{13}{6}$$

$$\frac{5}{8} \times 1\frac{1}{16}$$

$$\frac{5}{8} \times \frac{7}{8}$$

$$\frac{5}{8} \times \frac{6}{6}$$

$$\frac{5}{8} \times 3$$

| Less Than $\frac{5}{8}$ | Equal to $\frac{5}{8}$ | Greater Than $\frac{5}{8}$ |
|-------------------------|------------------------|----------------------------|
|                         |                        |                            |

# *Fractions Summary*



- ◆ Grade 3

- ◆ Develop understanding of fractions as numbers.

- ◆ Grade 4

- ◆ Extend understanding of fraction equivalence and ordering.
- ◆ Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- ◆ Understand decimal notation for fractions, and compare decimal fractions.

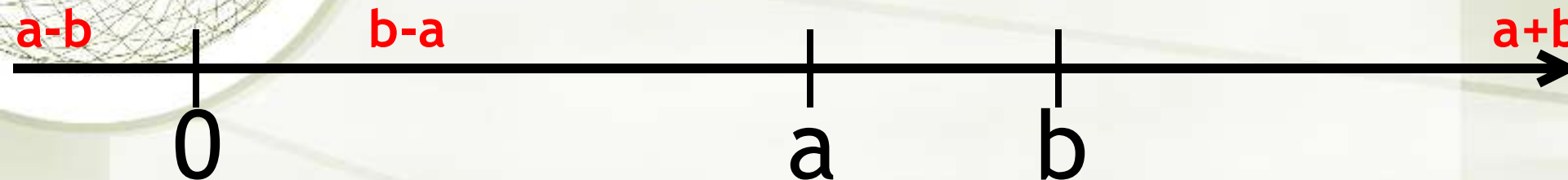
- ◆ Grade 5

- ◆ Use equivalent fractions as a strategy to add and subtract fractions.
- ◆ Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

- ◆ Grade 6

- ◆ Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
- ◆ Compute fluently with multi-digit numbers and find common factors and multiples.
- ◆ Apply and extend previous understandings of numbers to the system of rational numbers.

# Number Line Task



Where is  $a+b$  on the number line?

Where is  $b-a$ ?

Where is  $a-b$ ?

What about  $(a/b)$ ?

(Need to know where 1 is.)

iTunes

LIBRARY

- Music
- Movies
- TV Shows
- Podcasts 6
- Applications 1

Summary Applications Music Movies TV Shows Podcasts iTunes U Photos Info

iPod

Name: iPod touch

Capacity 7 GB

| Category | Usage    |
|----------|----------|
| Audio    | 1.46 GB  |
| Video    | 199.4 MB |
| Photos   | 949.3 MB |
| Apps     | 35.4 MB  |
| Other    | 194.5 MB |
| Free     | 4.21 GB  |

If you are experiencing problems with your iPod, you can restore it to its original settings by clicking Restore.

Restore

Options

- Open iTunes when this iPod is attached
- Sync only checked songs and videos
- Manually manage music and videos
- Encrypt iPod backup [Change Password...](#)

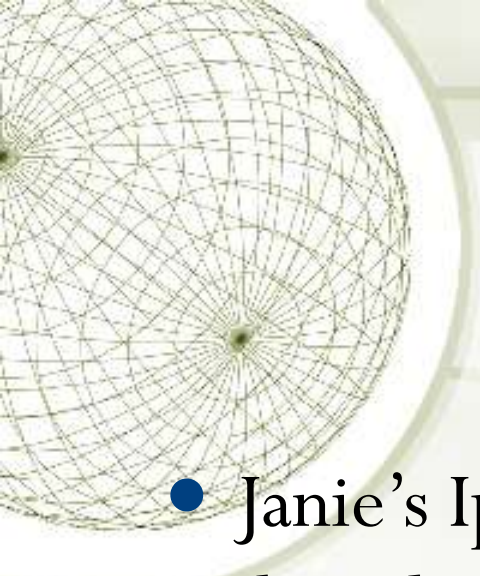
Capacity 7 GB

| Category | Usage    |
|----------|----------|
| Audio    | 1.46 GB  |
| Video    | 199.4 MB |
| Photos   | 949.3 MB |
| Apps     | 35.4 MB  |
| Other    | 194.5 MB |
| Free     | 4.21 GB  |

Sync

PLAYLISTS

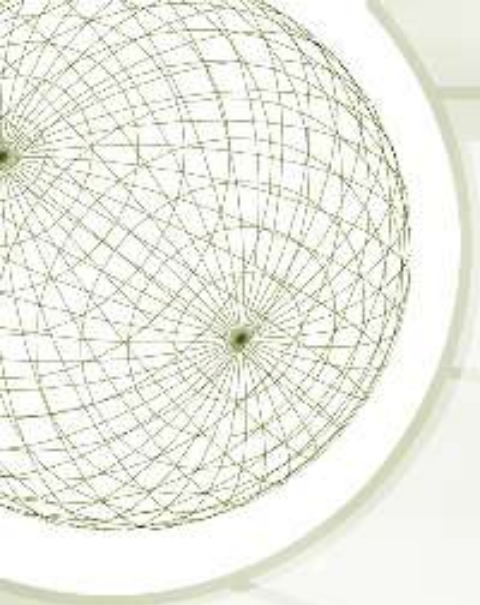
- iTunes DJ
- 90's Music
- Classical Music
- Music Videos
- My Top Rated
- Recently Added
- Recently Played
- Top 25 Most Played
- On-The-Go 1
- On-The-Go 2
- On-The-Go 3
- On-The-Go 4



## *How Much Space?*

- Janie's Ipod holds 10 Mb of music. Janie downloaded songs that were 2 Mbs. How many songs can she fit on her Ipod?
- Richard also has an Ipod that holds 10 Mb of music. He downloaded shorter songs that were only  $\frac{1}{2}$  Mb. How many songs can he fit on his Ipod?





# *Picture of $10 \div \frac{1}{2}$*

|----- 10 MB-  
-----|



# Grade 6 Content & Pacing

## Grade 6 Pacing Guide

| Unit Title                                   | Pacing  | Standards                                                                    |
|----------------------------------------------|---------|------------------------------------------------------------------------------|
| 1. Using Expressions and Equations           | 4 weeks | 6.EE.1<br>6.EE.2<br>6.EE.3<br>6.EE.4<br>6.EE.5<br>6.EE.6<br>6.EE.7<br>6.EE.8 |
| 2. Operating with Positive Rational Numbers  | 4 weeks | 6.NS.1<br>6.NS.2<br>6.NS.3<br>6.NS.4<br>6.G.2                                |
| 3. Understanding Positive & Negative Numbers | 2 weeks | 6.NS.5<br>6.NS.6<br>6.NS.7<br>6.NS.8                                         |
| 4. Applications of Geometry                  | 3 weeks | 6.G.1<br>6.G.3<br>6.G.4                                                      |
| 5. Ratios and Rates                          | 3 weeks | 6.RP.1<br>6.RP.2<br>6.RP.3                                                   |
| 6. Algebraic Reasoning                       | 5 weeks | 6.EE.6<br>6.EE.7<br>6.EE.9                                                   |
| 7. Statistics and Distribution               | 5 weeks | 6.SP.1<br>6.SP.2<br>6.SP.3<br>6.SP.4<br>6.SP.5                               |



## Grade 6: *EE*, *CR*

Write an expression that is equivalent to 64 using each of the following numbers and symbols once in the expression.

7

7

7

<sup>2</sup> (exponent of 2)

+

÷

( )

# Grade 6: EE, TE

Identify each expression as either equal to  $12x + 36y$  or **not** equal to  $12x + 36y$ . Drag each expression to the appropriate box below.

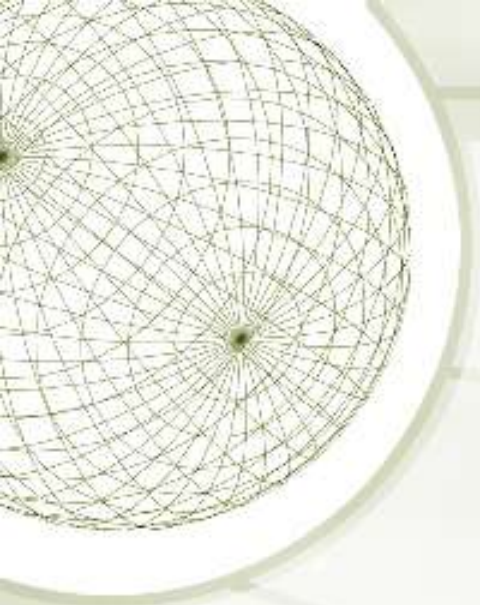
$$(10x + 36y) + (2x + y)$$

$$6(2x + 6y)$$

$$3(4x + 5y) + 7(3y)$$

$$5x + 5y + x + y + 6x + 6y$$

| <b>Expressions Equivalent to<br/><math>12x + 36y</math></b> | <b>Expressions Not Equivalent<br/>to <math>12x + 36y</math></b> |
|-------------------------------------------------------------|-----------------------------------------------------------------|
|                                                             |                                                                 |



# *Fact #1*

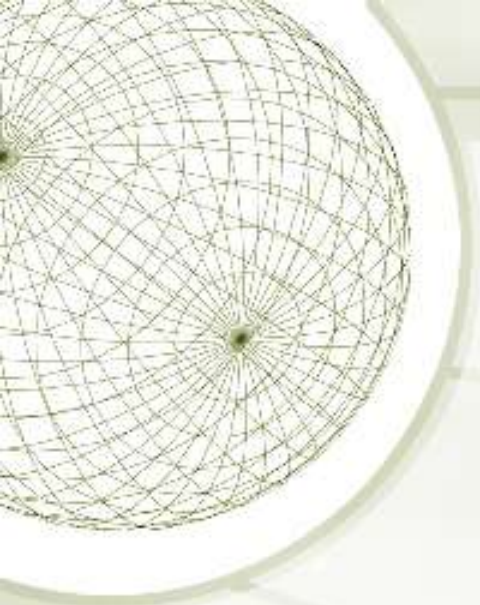
**A**



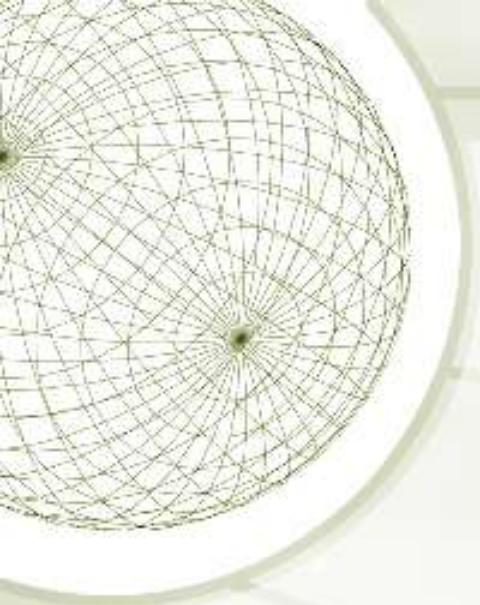
# *Fact #2*

**LB**

# *Fact #3*



**L**  
**C**



# *Fact #4*

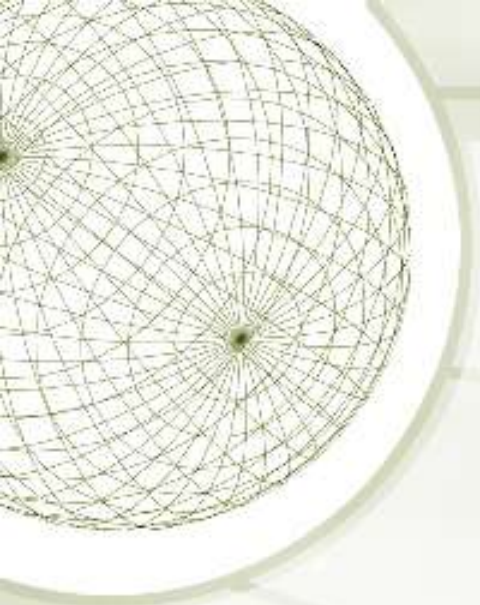
**D**



# *Fact #5*



**E**



# *Fact #6*

**F**

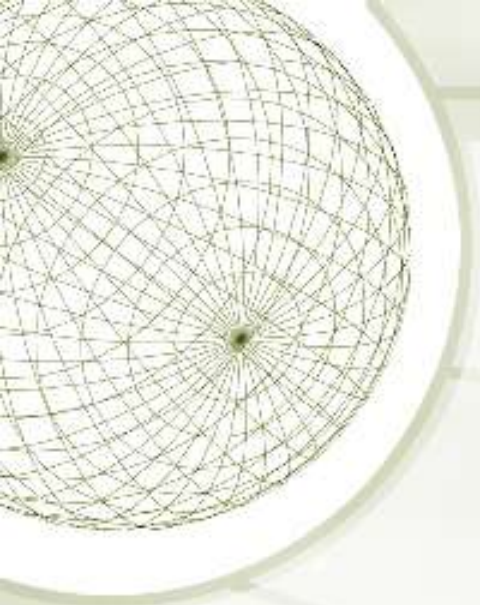
# *Fact #7*



**G**

# *Fact #8*





# *Fact #9*



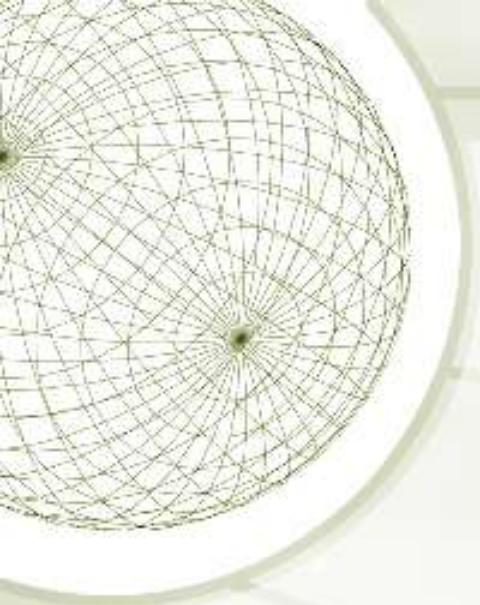
*What is this?*

CALL

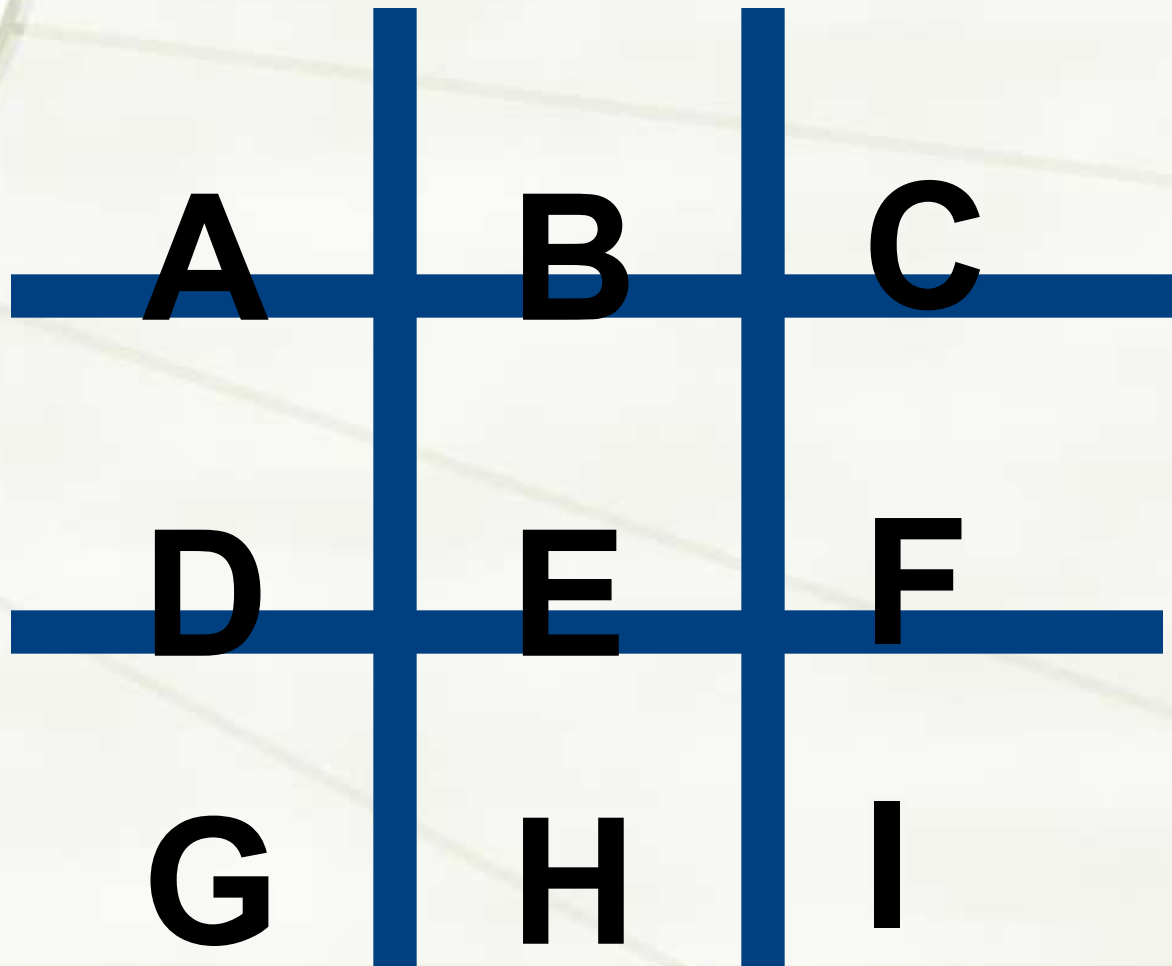
*What is this?*



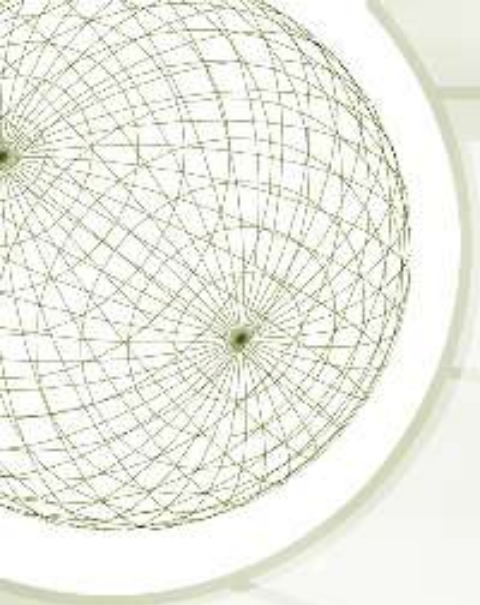
**F A C E**



*What If?*

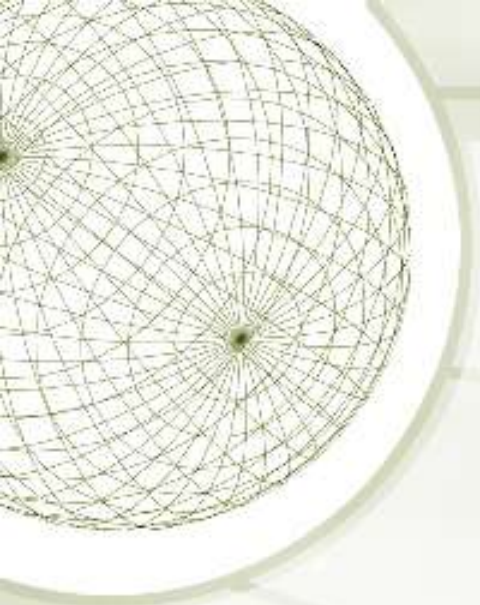






*Try Again*

סכסוכ



*Try Again*

DECADE

DECADE



# *What's the Point?*

## ★ Do NOT:

- ★ Isolate Skills

## ★ Do:

- ★ Connect mathematics

- ★ Model mathematics

- ★ Engage students with Technology

## Eric Milou

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### Dr. Milou



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### Comparing the Common Core with ...

- [California and Massachusetts mathematics standards](#)
- [The National Council of Teachers of Mathematics \(NCTM\) Focal Points](#)
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- [The National Assessment of Educational Progress \(NAEP\) Framework](#)
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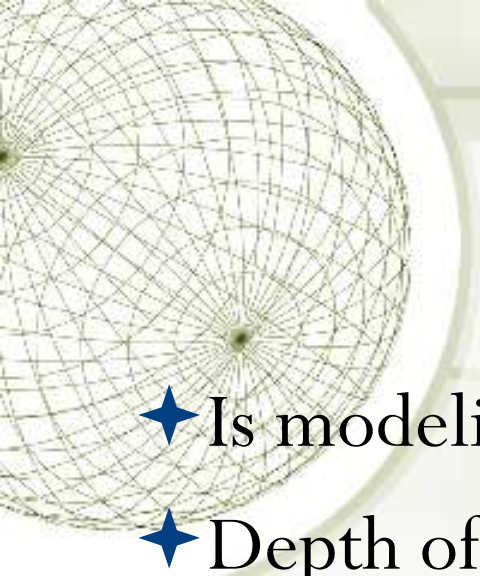
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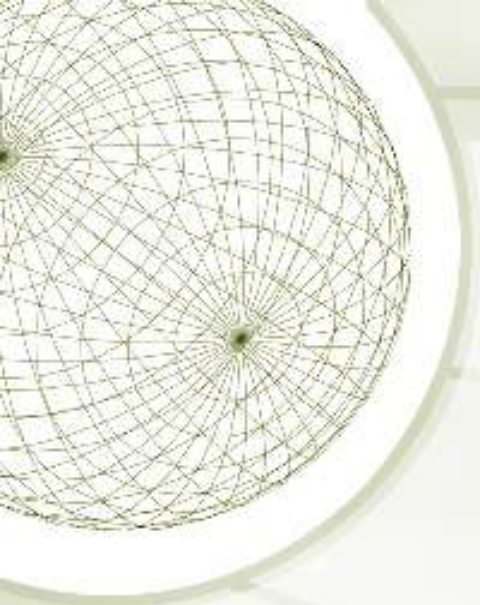
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# *Things to Consider in Summary*

- ◆ Is modeling and contexts a part of daily instruction?
- ◆ Depth of content especially fractions in grades 3-6
- ◆ Use of technology to engage, motivate, and assess
- ◆ Be wary of extraneous context



*Thank You*

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<http://ericmilou.com/>