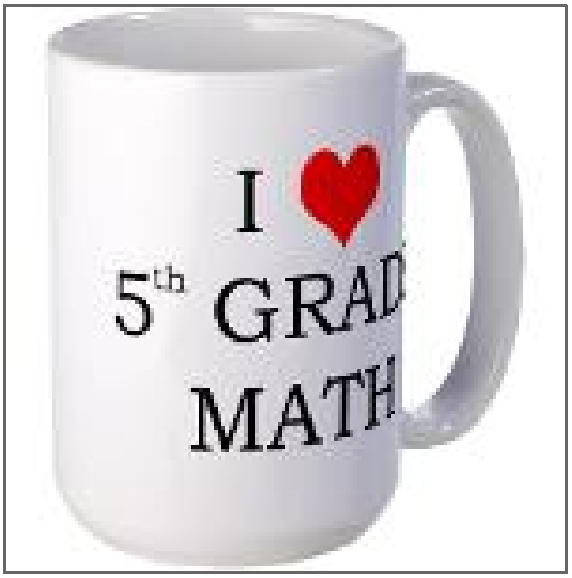
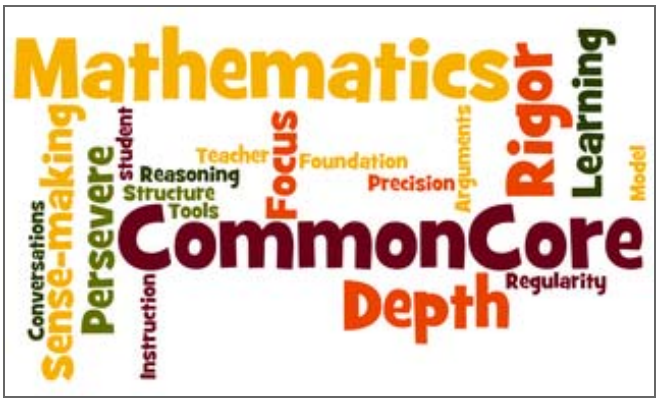
West Genesee Mathematics

A Parent's Guide to 5th Grade Mathematics



Compiled by Teachers at East Hill Elementary School



Dear Parents,

This guide is intended to better acquaint you with the Common Core Learning Standards for 5th Grade Mathematics. It has been compiled from several different sources.

Included in this guide is an overview of the Common Core Learning Standards for 5th grade, a glossary compiled by Michele Gipe, West Genesee Math Coach, that contains many of the newer terms to which students are being exposed, information from “A Parent’s Backpack Guide to the Common Core” from EngageNY.org, a sampling of strategies that students use in fifth grade for various concepts from a variety of sources, information from “Parent Roadmap: Supporting Your Child in Grade Five Mathematics,” and websites for both parents and students.

We will continue to update and revise these guides as we continue along our journey in the implementation of the common core. If you have any suggestions for things to include in this guide, please send an email to lcraig@westgenesee.org. I hope you find this guide helpful. Thank you!

Lisa Craig
East Hill Elementary Principal
Elementary Math Coordinator

Table of Contents

The way we taught students in the past simply does not prepare them for the higher demands of college and careers today and in the future. Your school and schools throughout the country are working to improve teaching and learning to ensure that all children will graduate high school with the skills they need to be successful.

In mathematics, this means three major changes. Teachers will concentrate on teaching a more focused set of major math concepts and skills. This will allow students time to master important ideas and skills in a more organized way throughout the year and from one grade to the next. It will also call for teachers to use rich and challenging math content and to engage students in solving real-world problems in order to inspire greater interest in mathematics.

Taken from Parent Roadmap: Supporting Your Child in Grade Five Mathematics

An Overview of 5th Grade Math

In Grade 5, instructional time should focus on three critical areas: (1) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions); (2) extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and (3) developing understanding of volume.

1. Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions, and make reasonable estimates of them. Students also use the meaning of fractions, of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for multiplying and dividing fractions make sense. (Note: this is limited to the case of dividing unit fractions by whole numbers and whole numbers by unit fractions.)

2. Students develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. They finalize fluency with multi-digit addition, subtraction, multiplication, and division. They apply their understandings of models for decimals, decimal notation, and properties of operations to add and subtract decimals to hundredths. They develop fluency in these computations, and make reasonable estimates of their results. Students use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain why the procedures for multiplying and dividing finite decimals make sense. They compute products and quotients of decimals to hundredths efficiently and accurately.

3. Students recognize volume as an attribute of three-dimensional space. They understand that volume can be measured by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve real world and mathematical problems.

Mathematical Practices

These eight practices are the goals of all math education, K-12

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.

Big Ideas in Grade 5

Operations and Algebraic Thinking
• Write and interpret numerical expressions.
• Analyze patterns and relationships.

Number and Operations in Base Ten
• Understand the place value system.
• Perform operations with multi-digit whole numbers and with decimals to hundredths.

Number and Operations—Fractions
• 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.

Measurement and Data
• Convert like measurement units within a given measurement system.
• Represent and interpret data.
• Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

Geometry
• Graph points on the coordinate plane to solve real-world and mathematical problems.
• Classify two-dimensional figures into categories based on their properties.

What is Changing in Mathematics Education

The information below was taken from the "Parent's Backpack Guide to Common Core State Standards" found on engageny.org.

To improve student learning, the new Common Core State Standards are different from the old ones. These changes are called shifts. The chart below shows what is shifting, what you might see in your child's backpack and what you can do to help your child. Again, if your child's assignments do not reflect the shifts, then talk to your child's teacher.

What's Shifting?	What to Look for in the Backpack?	What Can You Do?
• Your child will **work more deeply in fewer topics**, which will ensure full understanding. (less is more!)	• Look for assignments that require students to show their work and explain how they arrived at an answer.	• Know what concepts are important for your child based on their grade level and spend time working on those concepts.
• Your child will **keep building on learning year after year**, starting with a strong foundation.	• Look for assignments that build on one another. For example, students will focus on adding, subtracting, multiplying and dividing. Once these areas are mastered, they will focus on fractions. Building on that, they will then focus on Algebra. You should be able to see the progression in the topics they learn.	• Be aware of what concepts your child struggled with last year and support your child in those challenge areas moving forward.
• Your child will **spend time practicing and memorizing math facts**.	• Look for assignments that ask your child to master math facts such as addition groupings up to 20 or multiplication tables.	• Help your child know and memorize basic math facts. Ask your child to "do the math" that pops up in daily life.
• Your child will **understand why the math works and be asked to talk about and prove their understanding**.	• Your child might have assignments that ask her or him to show or explain their mathematical thinking - to SAY why they think their answer is the right one.	• Talk to your child about their math homework and ask them to teach you new concepts. Help them figure out ways to explain their thinking.
• Your child will now be asked to **use math in real-world situations.**	• Look for math assignments that are based on the real world. For instance, homework for 5th graders might include adding fractions as part of a dessert recipe or determining how much pizza friends ate based on fractions.	• Provide time every day for your child to work on math at home.

How 5th Grade "Fits" in the Progression

(taken from Parent Roadmap: Supporting Your Child in Grade Five Mathematics)

In grade five, students will build their understanding of the place value system by working with decimals up to the hundredths place. Students will also add, subtract, and multiply fractions, including fractions with unlike denominators. They will continue to expand their geometry and measurement skills, learning the concept of volume and measuring the volume of a solid figure.

Here are just a few examples of how students will develop and use their understanding of place value in grade five.

Grade Four Mathematics

- Use place value understanding to round multi-digit whole numbers to any place
- Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right
- Compare two multi-digit numbers based on meanings of the digits in each place, using the symbols > (more than), = (equal to), and < (less than)

Grade Five Mathematics

- Use place value understanding to round decimals to any place
- Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left
- Read, write, and compare decimals based on the meanings of the digits in the tenths, hundredths, and thousandths place

Grade Six Mathematics

- Understand that positive and negative numbers are used together to describe quantities having opposite directions or values
- Understand a rational number (fraction, decimal, and percent) as a point on the number line
- Understand ordering and absolute value of rational numbers

Students use place value understanding to figure out that, based on where the digits are located within the number, 0.115 is less than 0.151.

Students recognize that a 5 in the thousandths place is only one tenth the value of a 5 in the hundredths place.

Partnering with your Child's Teacher
(taken from Parent Roadmap)

Don't be afraid to reach out to your child's teacher—you are an important part of your child's education. Ask to see a sample of your child's work or bring a sample with you. Ask the teacher questions like:

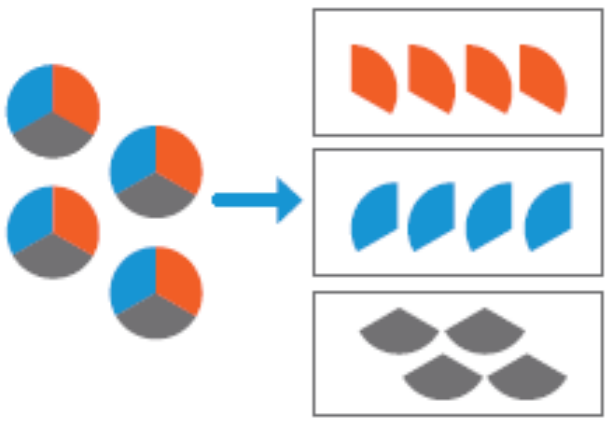
- Is my child at the level where he/she should be at this point of the school year?
- Where is my child excelling? How can I support this success?
- What do you think is giving my child the most trouble? How can I help my child improve in this area?
- What can I do to help my child with upcoming work?

Here are just a few examples of how students will learn about and work with fractions in grade five.

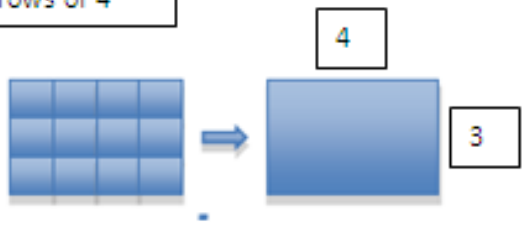
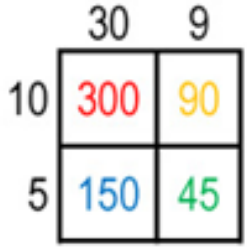
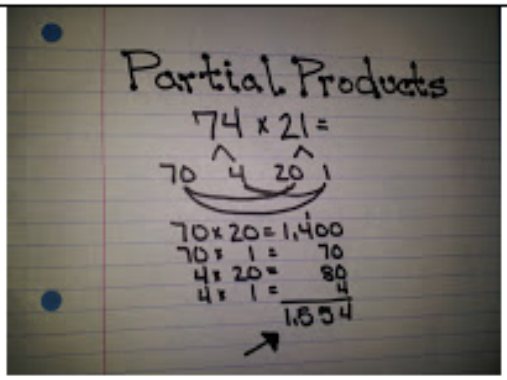
Grade Four Mathematics	Grade Five Mathematics	Grade Six Mathematics
• Break apart a fraction into smaller fractions with the same denominator, or bottom number, in more than one way. For example, $\frac{1}{6}=\frac{1}{8}+\frac{1}{8}+\frac{1}{8}=\frac{3}{8}+\frac{1}{8}$	• Interpret a fraction as division of the numerator (the top number) by the denominator (the bottom number)	• Divide fractions by fractions using visual models and equations to show the problem
• Explain why a fraction is equal to another fraction	• Add and subtract fractions with different denominators	
• Add and subtract mixed numbers (whole numbers mixed with fractions, such as $1\frac{1}{4}$) with the same denominators	• Multiply a fraction by a whole number or another fraction	
• Multiply a fraction by a whole number	• Divide fractions by whole numbers and whole numbers by fractions	

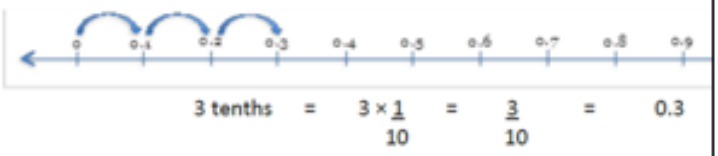
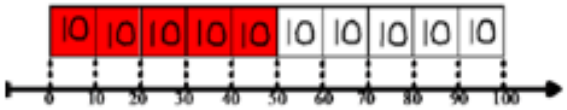
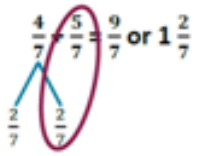
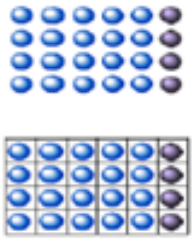
Understanding how to divide objects into equal shares prepares students for the division of fractions.

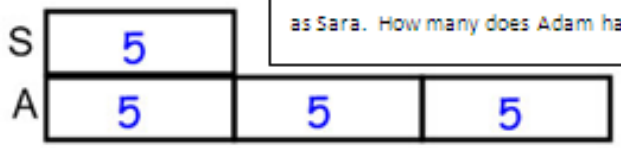
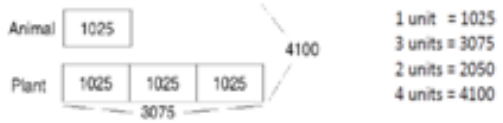
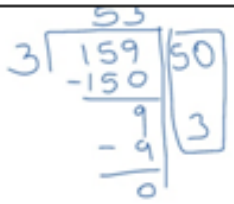
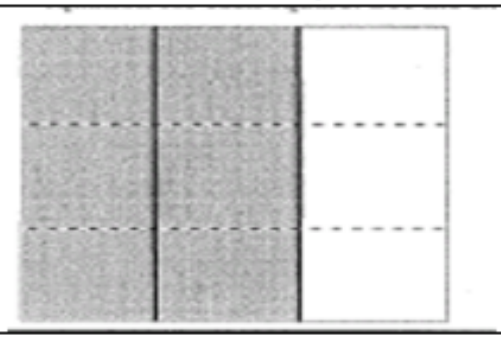
Students will use pictures such as this to see that 4÷3 is the same as dividing 4 objects equally among 3 shares, or having 4 thirds (4/3).



Glossary for 5th Grade Math

Term	Description	Visual Representation
Array	Objects organized into equal rows (going across) and columns (going down)- used for multiplication Illustration shows 3 rows of 4	3 x 4 3 rows of 4 
Area Model for Multiplication	Like the array, without the individual boxes. Strategy used for multiplying. The digits are broken up into their values and multiplied.	39x15  45 150 90 + 300 585
Partial Products	Like the area model, it breaks the each number into values and each is multiplied to the other.	

Number Line	The number line is used to develop a deeper understanding of whole number units, fraction units, measurement units, decimals, and negative numbers. Can be used for solving operations (+, -, x and ÷)	
	Using a number line for multiplying	
Decompose	Breaking a number down into smaller parts, to make them easier to manipulate	**Grade 4 Example 1** Decompose $\frac{4}{7}$ into $\frac{2}{7}$ and $\frac{2}{7}$. Add $\frac{2}{7}$ to $\frac{5}{7}$ to make 1 whole. $\frac{2}{7} + \frac{5}{7} = \frac{7}{7}$ Then add $\frac{7}{7}$ to $\frac{2}{7}$. $\frac{7}{7} + \frac{2}{7} = \frac{9}{7}$ or $1\frac{2}{7}$  **398 + 526 = 924** 
Equation	A number sentence consisting of two things that are equal	2 + 5 = 7 33 = 11 x 3
Distributive Property		 4 x 6 = 4 x 5 = 20 + 4 x 1 = 4 20 + 4 = 24

Distributive Property (continued)		5 threes + 2 threes = (5 + 2) threes 3 3 3 3 3 3 3 
Line Plot	A representation of data (like a graph) using a number line and x's to represent the data	
Tape Diagram	The tape diagram provides an essential bridge to algebra and is often called "pictorial algebra." They are pictorial representations of relationships between quantities used to solve word problems.	Sara has 5 cookies. Adam has 3 times as many as Sara. How many does Adam have? 
		Grade 5 Example *Sam has 1025 animal stickers. He has 3 times as many plant stickers as animal stickers. How many plant stickers does Sam have? How many stickers does Sam have altogether?*  1. He has 3075 plant stickers. 2. He has 4100 stickers altogether.
Partial Quotients	A strategy used for division.	
Visual/Area model for Fractions	A way to pictorially represent fractions This shows how 2/3 and 6/9 are equivalent	

Decimal Examples (taken from KATM Flip Book for Grade 5)

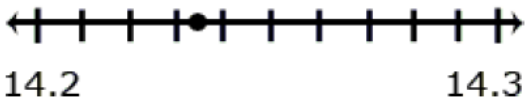
Example:
Some equivalent forms of 0.72 are:

72/100
7/10 + 2/100
7 x (1/10) + 2 x (1/100)
0.70 + 0.02

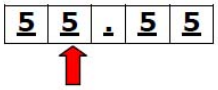
70/100 + 2/100
0.720
7 x (1/10) + 2 x (1/100) + 0 x (1/1000)
720/1000

Example:
Round 14.235 to the nearest tenth.

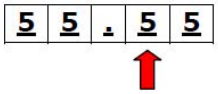
- Students recognize that the possible answer must be in tenths thus, it is either 14.2 or 14.3. They then identify that 14.235 is closer to 14.2 (14.20) than to 14.3 (14.30).



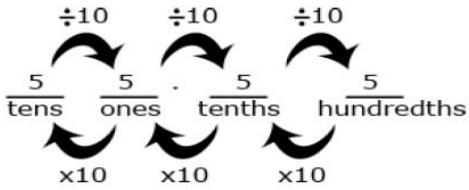
In the number 55.55, each digit is 5, but the value of the digits is different because of the placement.



The 5 that the arrow points to is 1/10 of the 5 to the left and 10 times the 5 to the right. The 5 in the ones place is 1/10 of 50 and 10 times five tenths.



The 5 that the arrow points to is 1/10 of the 5 to the left and 10 times the 5 to the right. The 5 in the tenths place is 10 times five hundredths.



The next three and a half pages were taken from the East Irondequoit website. They include a variety of addition and subtraction strategies that are first introduced to students in K-2 with smaller numbers, and are then extended into the upper elementary grades with bigger numbers. The "traditional" algorithm for addition and subtraction are introduced in 4th grade. We no longer use the terms borrowing and *carrying,* we actually haven't used them for years. The proper term is *regrouping*. The "traditional" algorithm for multiplication is introduced in 5th and the "traditional" algorithm for division is introduced in 6th grade (but may be introduced earlier.)

Strategies for Addition

1. **Breaking Apart** (Place Value), also known as “Separating” or “Decomposing”

Break both numbers down to place value and add each, starting with the largest:

46 + 25 =

46 breaks into 40 plus 6 (40 + 6), 25 breaks into 20 plus 5 (20 + 5)

40 + 20 = 60

6 + 5 = 11

60 + 11 = 71

Or:

Keep one number intact and only break second number down by place value and adding each place:

46 + 25 =

46 stays intact and 25 breaks into 20 and 5

46 + 20 = 66

66 + 5 = 71 or *66 + (4 + 1)

*Note: some students may prefer to break the 5 apart (4 + 1) so that they can add 4 to 66 and get 70, then add on 1. It would only make sense to break down the ones to get to the “landmark” number 10.

2. **Compensation:**

Round one or more of the numbers to numbers that are easier to work with, then compensate:

256 + 687

256 [+13] + 700 = → 956

956 - [13] =

(decompose 13)

956 - 10 = 946

13 is added to **687** to get 700, an easier number to work with - keeping track of the adjustment is critical to making this strategy work, encourage students to box the adjustment (here we box the adjustment as -13 since 13 was added , **now 13 must be subtracted** out of the computation to get the final answer.

3. **Transformation:**

Transform the problem into an equivalent problem that is easier: (like compensation, this is a strategy more advanced math thinkers can handle, you're adding to one and taking away the same amount from the other)

a. 46 + 28 = ___

adding 2 to 28 makes it 30, an easy number to work with but if 2 is added into this equation, then 2 must be subtracted from the 46.

28 + 2 = 30

46 – 2 = 44

30 + 44 = 74

b. 256 + 687 =

add 13 to 687 to make it 700, subtract 13 from 256 to make it 243, 700 + 243 = 943

Subtraction Strategies (taken from East Irondequoit website)

1 **Breaking Apart/Separating:**

Subtract one number in parts from the other number which stays intact, always starting with largest place value to subtract .

a. 54 – 23 =

23 can be broken into 20 + 3

54 – 20 = 34

34 – 3 = 31

or 56 – 29 =

29 can be broken into 20 + 6 + 3, breaking 9 into 6 + 3 makes it easier to subtract

56 – 20 = 36

36 – 6 = 30

30 – 3 = 27

b. 547 – 297 =

keep 547 intact, break 297 into 200 + 90 + 7, subtract out one place value at a time

547 – 200 = 347

347 – 90 = 257

257 – 7 = 250

or 547 – 297 = _____, break 297 into 247 + 50, subtract out each part

547 – 247 = 300, 300 – 50 = 250

2. Adding Up/Counting On:

Start with smaller number, add up to a landmark number*, from the landmark add up to get to the target number. Add the two numbers you used.

212 – 197 =

197 + **3** = 200*

200 +**12** = 212

3 + 12 = 15

516 – 305 =

305 + **195** = 500*

500 + **16** = 516

195 + 16 = 211 (195 + 10 = 205, 205 + 6 = 211)

3. **Subtracting across the zeros:**

Adding up is a good strategy when one of the subtrahends involves 0's. Students have a great deal of difficulty subtracting across the zeros.

$10.00 – $4.75 =

Think: $4.75 + $.25 = $5.00

$5.00 + $5.00 = $10.00

$5.00 + $.25 = $5.25

4. **Subtracting from 9's:**

Given 1,000 – 273:

(subtract 1 from 1,000 making it 999 – subtracting from 9's doesn't require any regrouping)

999 +1 *box the adjustment to remember to add it back in*

-273

726 +1 *now add back the 1, the answer is 727*

Given 1006 – 273 :

(subtract 7 from 1006 making it 999,

999 +7

– 273

726 +7 *now add back the 7 making the answer 733*

3. **Transformation**

Transform the entire problem to an equivalent problem that is easier to solve by adding or subtracting the same number from/to both numbers in the subtraction problem. (Using the same number maintains the difference between the two numbers.) The goal of adding or subtracting a number is to make one or more of the numbers easier to work with.

547 – 297 =

add **3** to both numbers to bring **297 to 300** and **547 to 550**, now 300 is an easier number to subtract from 550

550 - 300 = 250

4. **Compensation**:

Adjust one of the numbers in a math problem in order to make them easier to work with.

a. 45 – 27 =

27 - 2 = 25

45 – 25 = 20

20 + 2 = 18

→ You ignored 2 out of the 27 so you need to subtract 2 out of the answer.

b. 45 – 27 =

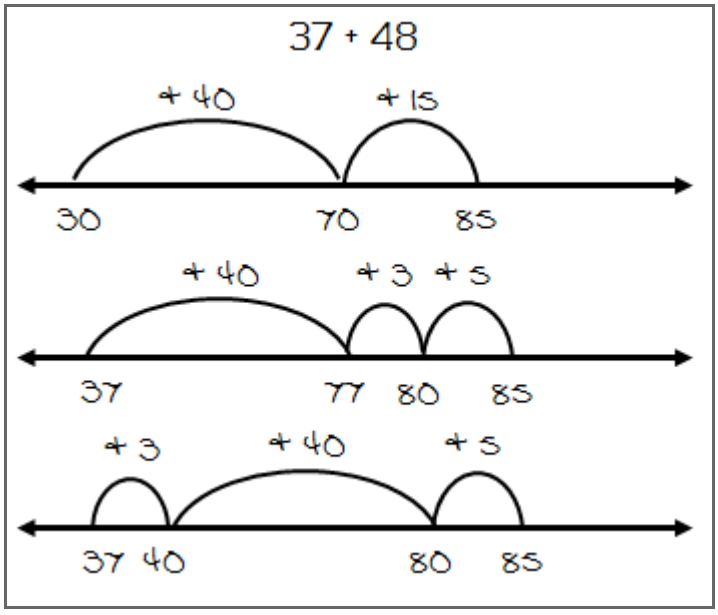
45 + 2 = 47

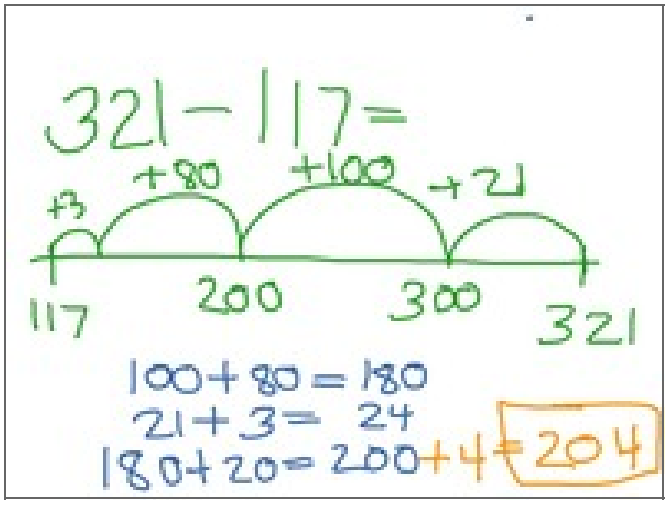
47 – 27 = 20

20 – 2 = 18

→ You added 2 to 45 so you need to subtract 2 out of the answer.

Open or Numberless Number Line (A strategy for addition or subtraction.)

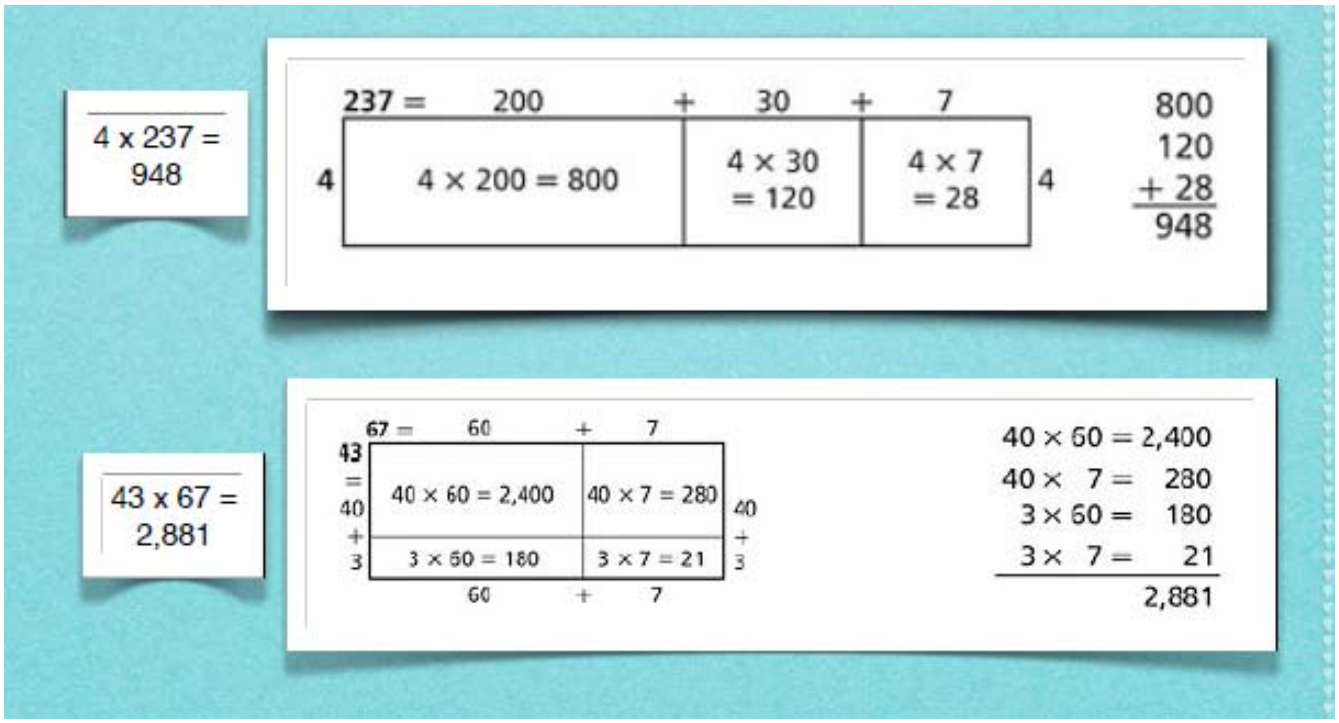




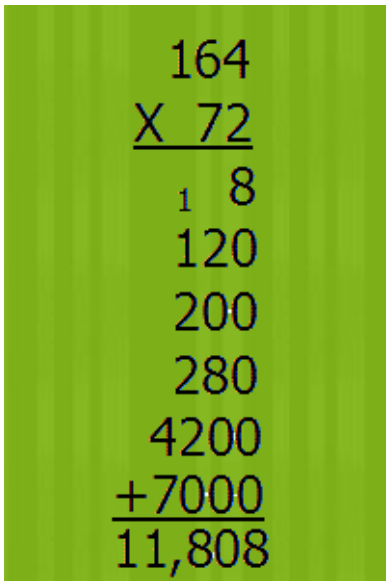
There are several ways to use an open number line for both addition and subtraction.

Multiplication Strategies (taken from Hudsonville (Michigan) Central website)

Rectangular Area Models:



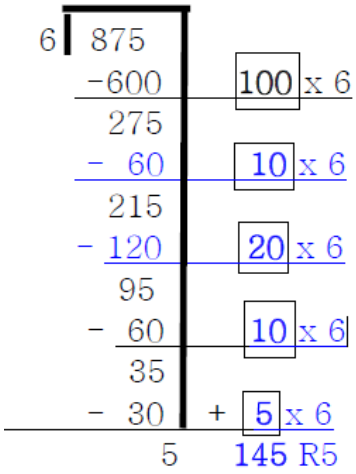
More Partial Product Multiplication Strategies



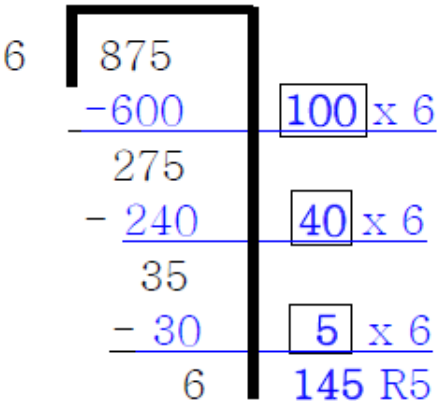
http://everydaymath.uchicago.edu/teaching-topics/computation/mult-part-prod/

Division Strategies (taken from East Irondequoit)

Partial Quotients Models:



As the students become fluent in multiples of the divisor and the powers of 10, this becomes a very efficient strategy.



Division Strategies (taken from the KATM Flipbook)

Student 1
592 divided by 8
There are 70 8's in 560
592 - 560 = 32
There are 4 8's in 32
70 + 4 = 74

Student 2
592 divided by 8
I know that 10 8's is 80
If I take out 50 8's that is 400
592 - 400 = 192
I can take out 20 more 8's which is 160
192 - 160 = 32
8 goes into 32 4 times
I have none left
I took out 50, then 20 more, then 4 more
That's 74

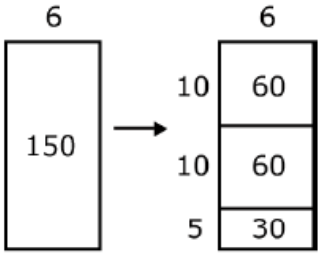
592	
−400	50
192	
−160	20
32	
−32	4
0	

Student 3
I want to get to 592
8 x 25 = 200
8 x 25 = 200
8 x 25 = 200
200 + 200 + 200 = 600
600 - 8 = 592
I had 75 groups of 8 and took one away, so there are 74 teams

Open Array or Area Models

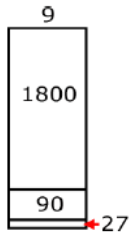
Example A:

150 ÷ 6



Example B:

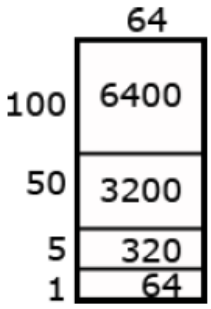
1917 ÷ 9



A student's description of his or her thinking may be:
I need to find out how many 9s are in 1917. I know that 200 x 9 is 1800. So if I use 1800 of the 1917, I have 117 left. I know that 9 x 10 is 90. So if I have 10 more 9s, I will have 27 left. I can make 3 more 9s. I have 200 nines, 10 nines and 3 nines. So I made 213 nines. 1917 ÷ 9 = 213.

Example: 9984 ÷ 64

- An area model for division is shown below. As the student uses the area model, s/he keeps track of how much of the 9984 is left to divide.



64 | 9984
-6400 (100 x 64)
3584
-3200 (50 x 64)
384
-320 (5 x 64)
64
-64 (1 x 64)
0

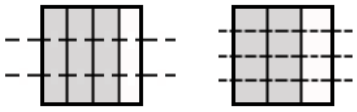
Fraction Examples (taken from the 5th Grade KATM Flipbook)

Example:

Jerry was making two different types of cookies. One recipe needed ¾ cup of sugar and the other needed $^2/_3$ cup of sugar. How much sugar did he need to make both recipes?

- Mental estimation:
  - A student may say that Jerry needs more than 1 cup of sugar but less than 2 cups. An explanation may compare both fractions to ½ and state that both are larger than ½ so the total must be more than 1. In addition, both fractions are slightly less than 1 so the sum cannot be more than 2.

- Area model

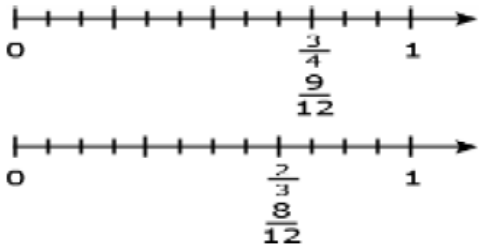


$\frac{3}{4}$ cup of sugar

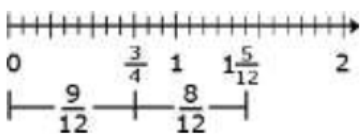
$\frac{2}{3}$ cup of sugar

$\frac{3}{4}=\frac{9}{12}$ $\frac{2}{3}=\frac{8}{12}$ $\frac{3}{4}+\frac{2}{3}=\frac{17}{12}=\frac{12}{12}+\frac{5}{12}=1\frac{5}{12}$

- Linear model



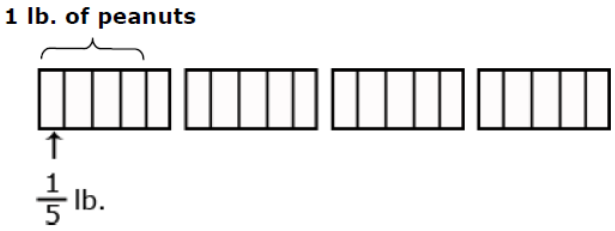
Solution:



Example:
Knowing how many in each group/share and finding how many groups/shares

- Angelo has 4 lbs of peanuts. He wants to give each of his friends 1/5 lb. How many friends can receive 1/5 lb of peanuts?

A diagram for 4 ÷ 1/5 is shown below. Students explain that since there are five fifths in one whole, there must be 20 fifths in 4 lbs.



Websites for Parents

For more information on the Common Core State Standards for mathematics, go to http://www.corestandards.org/about-the-standards/key-points-in-mathematics or http://www.commoncoreworks.org.

For more information on the standards in mathematics related to place value (Number and Operations in Base Ten) or fractions, go to http://commoncoretools.me/category/progressions/.

For more information on helping your child learn mathematics (with activities from pre-school to grade five), go to http://www2.ed.gov/parents/academic/help/math/index.html.

For the full text of the Common Core Learning Standards go to: http://www.p12.nysed.gov/ciai/common_core_standards/pdfdocs/nysp12cclsmath.pdf

Additional websites:

www.EngageNY.org

illuminations.nctm.org

www.kahnacademy.org

Helping Your Children with Homework

"The first teachers are the parents, both by example and conversation." Lamar Alexander

In helping children learn, one goal is to assist children in figuring out as much as they can for themselves (e.g., constructing meaning). You can help by asking questions that guide, without telling what to do.

Good questions and good listening will help children make sense of mathematics, build self-confidence, and encourage mathematical thinking and communication. A good question opens up a problem and supports different ways of thinking about it. Here are some questions you might try; notice that none of them can be answered with a simple "yes" or "no."

Getting Started

- What do you need to find out?
- What do you need to know?
- How can you get that information?
- Where can you begin?
- What terms do you understand or not understand?
- Have you solved similar problems that would help?

While Working

- How can you organize the information?
- Can you make a drawing (model) to explain your thinking?
- Are there other possibilities?
- What would happen if…?
- Can you describe an approach (strategy) you can use to solve this?
- What do you need to do next?
- Do you see any patterns or relationships that will help solve this?
- How does this relate to…?
- Can you make a prediction?
- What did you…?
- What assumptions are you making?

Reflecting about the solution

- How do you know your solution (conclusion) is reasonable?
- How did you arrive at your answer?
- How can you convince me your answer makes sense?
- What did you try that did not work?
- Has the question been answered?
- Can the explanation be made clearer?

Responding (helping your children clarify and extend their thinking)

- Tell me more
- Can you explain it in a different way?
- Is there another possibility or strategy that would work?

Websites for 5th Graders

www.xtramath.org

www.multiplication.com/games

www.ictgames.com/

www.eduplace.com/math/mthexp

http://www.aplusmath.com/

http://www.aaamath.com/

http://mathforum.org/dr.math/

http://www.coolmath4kids.com/

http://www.funbrain.com/

http://www.mathstories.com/

http://www.teachrkids.com/

http://www.eduplace.com/math/brain/index.html

http://www.mathplayground.com/wordproblems.html

Apps

Math Splash Bingo (free)

5th Grade Math Common Core ($2.99)

5th Grade Learning Games (free)

Freddy's Fractions (free)

Adventure Basic School Math Drills ($1.99)

Resources Used in this Publication

East Irondequoit, NY CSD, www.eastiron.org, Parent Center Link on Left

EngageNY, www.engageny.org

Hudsonville, MI CSD Parent Presentation, www.hudsonville.k12.mi.us

Kansas Association of Teachers of Mathematics (KATM) Flip Books, www.katm.org

New York State Education Department, Common Core Learning Standards for Mathematics, K-12

Parent Roadmap: Supporting Your Child in Grade Five Mathematics, Council of the Great City Schools, Washington, D.C.; http://www.cgcs.org