

Resources and Ideas for Families

WELCOME!

This newsletter is sent home to families every nine weeks. It provides information on what your child is learning in math, activities you can do at home to reinforce the content, and suggestions for books and resources you can use to help your child learn math.

BUILDING A MATHEMATICAL COMMUNITY

NUMBER TALKS

During math class, students should experience a Number Talk, a structured classroom conversation around a purposefully crafted computation problem that is solved mentally.

How would you solve 9×16 mentally?

Lia used friendly numbers: 9×16
 $+1$ (group of 16)
 $10 \times 16 = 160$
 $160 - 16 = 144$

Ben used partial products: $9 \times 16 = 90$
 $9 \times 6 = 54$
 $90 + 54 = 144$

Michael broke 9 factor into smaller factors: 9×16
 $9 \times (8 \times 2)$
 $72 \times 2 = 144$

Lisbeth used doubling and halving: 9×16
 18×8
 36×4
 72×2
 $144 \times 1 = 144$

Sharing and discussing computation strategies provide students with the opportunity to:

- Clarify thinking.
- Investigate and apply mathematical relationships.
- Build a repertoire of efficient strategies.
- Make decisions about choosing efficient strategies for specific problems.
- Consider and test other strategies to see if they are mathematically logical.

Number Talks: Helping Children Build Mental Math and Computation Strategies, by: Sherry Parrish.

STUDENT INVENTED STRATEGIES

During Number Talks, students are encouraged to use student invented strategies, flexible methods of computing that vary with the numbers and the situation. Successful use of the strategies requires that they be understood by the one who is using them --- hence the term invented.

Flexible methods of computation involve decomposing and composing numbers in a wide variety of ways.

Elementary and Middle School Mathematics Teaching Developmentally, by: Van de Walle, Karp, Bay-Williams

Subtracting in Parts (Place)

$452 - 100 = 352$
 $352 - 90 = 262$
 $262 - 7 = 255$

Subtraction Strategies

Problem $452 - 197$

Compensating (Equivalent Problem)

$452 - 197$
 $+3 +3$
 $455 - 200$
 255

$452 - 197 = 455 - 200$

Number Line - Adding Up

$200 + 3 + 52 = 255$

Number Line - Subtracting Back

$452 - 197 = 255$

MATH IS FUN!

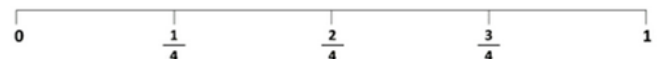
Check out the [MATH IS FUN](http://www.jcpsmath.weebly.com) website which contains resources to help children learn math. Here you will find "How to Videos", Online Games, Vocabulary, and APPs related to the content your child is learning.



www.jcpsmath.weebly.com

During the 2nd nine weeks, Third Grade students learn to:

- **Recognize a unit fraction (fractions with a numerator of 1) is formed when a whole is partitioned into equal parts.** For example, if a rectangle is divided into four equal parts, each section would form the unit fraction $\frac{1}{4}$. This standard includes fractions greater than 1.
- **Represent fractions on a number line.** Students will learn to show fractions using a number line. For example, if a child is working with fourths, they should recognize the line should be divided into four equal parts from 0 to 1. An example is below.



- **Explain division as a set of objects partitioned into an equal number of shares.** For example, students can interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares.
- **Tell and write time to the nearest minute.** In addition, students will solve word problems involving addition and subtraction of time intervals in minutes by representing the problem on a number line. For example, Mary starts her dance lesson at 4:45. If the lesson is 45 minutes long and it takes her 20 minutes to get home, what time will Mary get home?

Activities to Try at Home:

- Provide your child with the opportunity to practice telling time to the nearest minute. Children have lots of experience telling time with digital clocks but need practice with analog (clocks with hands).
- Practice how much time is elapsed in everyday situations. For example, if you start baking cupcakes at 4:45 pm and it takes 35 minutes to cook, what time will they be finished? If we left our house at 10:35 am and arrived at Grandma's house at 12:15 pm, how long did it take us to drive there?
- Share with your child how you use multiplication and division in your daily life. For example, if you are at the grocery store, be explicit and say to your child, "The cereal is \$3 a box. I need 3 boxes; so I use multiplication to figure out quickly how much it will cost. \$3 times 3 equals \$9."
- Look for opportunities to allow your child to practice identifying fractions in your home. For instance, if there are three eggs left in the carton, ask, "What fraction of eggs is left in the carton? What fraction of eggs have we used?"

Check Out These Books!

Below are some suggested books which connect to math content students are learning this cycle.

- ***2 x 2 Boo: A Set of Spooky Multiplication Stories***
by Loreen Leedy
- ***Bats Around the Clock***
by Kathi Appelt
- ***Telling Time***
by Jules Older
- ***The Great Divide: A Mathematical Marathon***
by Dayle Ann Dodds
- ***A Fraction's Goal: Parts of a Whole***
by Brian P. Cleary
- ***The Grapes of Math***
by Greg Tang
- ***One Hundred Hungry Ants***
by Elinor Pinczes



MATH TASK

Halves, Thirds and Sixths

From: *Illustrative Mathematics*

What fraction of the area of each rectangle is shaded? Name the fraction in as many ways as you can.



Answers: A. $\frac{1}{2}$ or $\frac{3}{6}$

B. $\frac{2}{6}$ or $\frac{1}{3}$

C. $\frac{3}{6}$ or $\frac{1}{2}$

D. $\frac{4}{6}$ or $\frac{2}{3}$