MATH MATTERS

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

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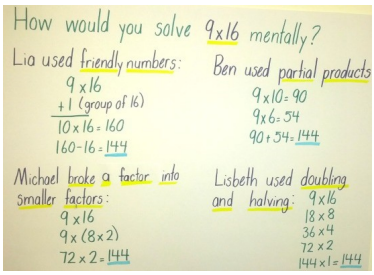
NUMBER TALKS

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



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

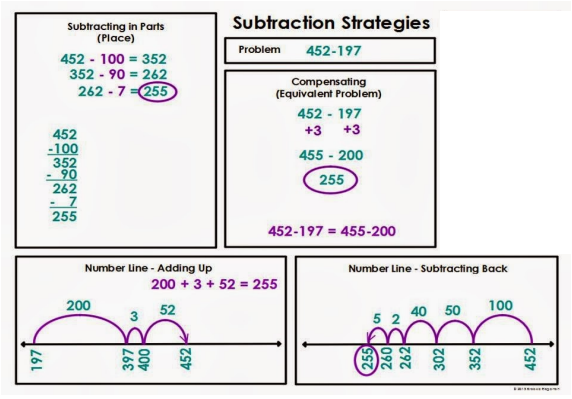
- Clarify thinking.
- Investigate and apply mathematical relationships.
- Build a repertoire of efficient strategies.
- Make decisions about choosing efficient strategies for specific problems.
- Consider and test other strategies to see if they are mathematically logical.

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, and Bay-Williams



MATH IS FUN!

Check out the MATH IS FUN 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, Fourth Grade students learn to:

- **Add and subtract fractions with like denominators.** Students will understand addition as joining and subtraction as separating parts referring to the same whole.
- **Use visual models (pictures) to identify and create equivalent (equal) fractions.** For example, a student is able to identify that 1/2 is equal to 3/6. Also, when given the fraction 2/3, he would identify an equivalent fraction such as 4/6 or 6/9.
- **Compare two fractions with different numerators and denominators using <,>, or =.** A student would be able to figure out if a fraction is greater or less than another fraction even if the denominator and numerator are not the same by creating a fraction with a common denominator or by using a benchmark fraction.
- **Round multi-digit numbers to any place value using multiplication and division.** For example, to solve the equation of 344 x 12, students can round 344 to 300 and then multiply 300 x 12 to find the estimate of 3,600.
- **Explain how a multiplication equation (e.g., 35 = 5 x 7) can be interpreted as a comparison (e.g., Johnny has 5 times as many cards as Bill who has 7 cards.).**
- **Distinguish between multiplicative (as many times as) and additive (more) comparisons in word problems.** For example, Sandra raised $15 for the PTA and Anita raised $45. How much money did Anita raise as compared to Sandra?

Resources and Ideas for Families

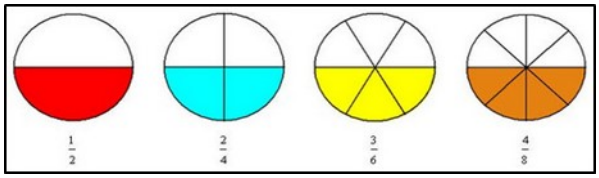
Comparing Fractions Example

For example, if you are comparing 1/3 and 5/8, a fourth grader could create equivalent fractions with the new denominator of 24. The fractions become 8/24 (1/3) and 15/24 (5/8). A student could also use $\frac{1}{2}$ as a benchmark because he should recognize that 1/3 is less than $\frac{1}{2}$ and 5/8 is more than $\frac{1}{2}$.

A. $\frac{1}{3}$ ○ $\frac{5}{8}$

B. $\frac{8}{24}$ ○ $\frac{15}{24}$

A. < B. <



Activity to Try at Home

- Allow your child to explain fractions with measuring cups. Fill the cup with water to the $\frac{1}{4}$ mark and have your child observe how much water is in the cup. Next fill to the $\frac{1}{2}$ mark and compare with the $\frac{1}{4}$ line on the cup. Repeat with other measurements on the cup so that he is able to get a sense of how many fourths is equal to one-half, three-fourths and one cup.

Check Out These Books!

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

- ***Working with Fractions*** *by David Adler*
- ***Fraction Action*** *by Lareen Leedy*
- ***Fractions in Disguise: A Math Adventure*** by Edward Einhorn
- ***If You Were a Fraction*** by Trisha Speed Shaskan

MATH TASK

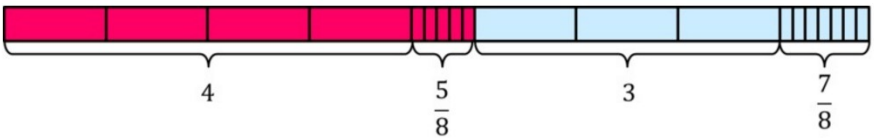
Cynthia's Perfect Punch

Cynthia is making her famous "Perfect Punch" for a party. After looking through the recipe, Cynthia knows that she needs to mix 4 5/8 gallons of fruit juice concentrate with 3 7/8 gallons of sparking water.

- How much punch will this recipe make?

Solution: 8 1/2 gallons of punch

$$4\frac{5}{8} + 3\frac{7}{8} = (4 + \frac{5}{8}) + (3 + \frac{7}{8})$$



From: *Illustrative Mathematics*