

***Family Night –
Math Strategies***

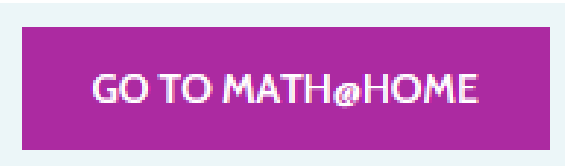
Hal Hutchens Elementary
February 9, 2021

Math Inventory

- ▶ The Math Inventory is a computerized test that results in a score, or Quantile® , that indicates how well a student understands mathematical skills and concepts along a developmental continuum. A student who scores at the Proficient level by the end of the school year is considered to be performing on grade level and is on track to meet the demands of college and career by the end of high school.
- ▶ Test Administration - 3 times a year (August, December/January, May)



Quantile Resource

- ▶ <https://www.quantiles.com/parents-students/find-math-resources-to-support-classroom-learning/mathhome/> or <http://tinyurl.com/hutmath>
- ▶ Click on A purple rectangular button with the text "GO TO MATH@HOME" in white, uppercase letters.
- ▶ Enter Student's Information from their Math Inventory Score Report
 - ▶ Use the Instructional Recommendations section to pick out keywords (i.e. Numbers and Operations, Algebraic Thinking, Patterns, etc.)

Fifth Grade Math Compact Goal

- ❖ Students will score within the 5th grade quantile band on the Math Inventory. (Fifth Grade Quantile Band: 645-771)

In the 5th Grade Classroom

Teachers will provide a home task that incorporates new math strategies as they are introduced and review previously taught math strategies.

At Home

Families will provide time and focus for their child to complete their math homework then review and go over the homework daily.

Number Talks: What are They?

- ▶ Number talks are brief discussions (5-15 minutes) that focus on student solutions for a single, carefully chosen mental math computation problem.
- ▶ Students share their different mental math processes aloud while the teacher records their thinking visually on a chart or board.
- ▶ The teacher often names the strategies each student uses.
- ▶ Other students may question, critique, or build on the strategies that are shared.



Number Talks

- ▶ Silent signals are used to communicate so that peers have adequate wait time to think.

Reminders:

- ❖ Listen to others and respect all answers.
- ❖ Participate & Collaborate
- ❖ Try new strategies.
- ❖ Explain your thinking/steps.
- ❖ Be flexible in how you think!

Hand Symbols



I'm still thinking.



I have an answer and a strategy.



I have more than one strategy.



I agree.

FRACTION NUMBER TALKS 1/2's

Which of these models represent $\frac{1}{2}$ of the whole? How do you know?

A ✓ $\frac{2}{4} = \frac{1}{2}$
 There are 2 equal pieces. 1 is filled.
 A. Yes, A represents $\frac{1}{2}$.
 When folded, pieces are equal - $\frac{1}{2}$.
 $\frac{1}{2} + \frac{1}{2} = 1$

B ✓ $\frac{1}{2}$ of the 2 equal pieces is shaded.
 Model is similar to A, folded.

C ✓ Square - equal sides. 1 of the equal pieces when cut diagonally.

Which of these models represent $\frac{1}{2}$ of the whole? How do you know?

A ✓ $\frac{2}{4} = \frac{1}{2}$
 We can make more one piece.
 Even though there are 4 pieces and 1 is shaded, the pieces are NOT equal.

B X

C X If we expand the shaded, it could possibly represent a $\frac{1}{2}$. However, the shaded portion is less than $\frac{1}{2}$.

Whole - 2 pieces - same size - 1 piece is shaded - 1 is not shaded.
 Can be folded or cut to compare 2 pieces.
 "Symmetrical!"

No. a rectangle does not have 4 congruent sides. Therefore, it does not have symmetrical when cut diagonal.

$\frac{4}{8} \times \frac{1}{2} = \frac{1}{2}$
 We can simplify by 2 to prove it. 4 ÷ 2 = 2, 8 ÷ 2 = 4. Are both even.
 B. NO, pieces are not shaded equal.

$$34 + 16 = 50$$

$$\begin{array}{r} 30 \quad 4 \quad 10 \quad 6 \\ \diagdown \quad \diagup \quad \diagdown \quad \diagup \\ 4 + 6 = 10 \end{array}$$

$$30 + 10 + 10 = 50$$

LEARNING AT THE PRIMARY POND

How would you solve 9×16 mentally?

Lia used friendly numbers:

$$\begin{array}{r} 9 \times 16 \\ + 1 \text{ (group of 16)} \\ \hline 10 \times 16 = 160 \\ 160 - 16 = \underline{144} \end{array}$$

Ben used partial products:

$$\begin{array}{r} 9 \times 10 = 90 \\ 9 \times 6 = 54 \\ 90 + 54 = \underline{144} \end{array}$$

Michael broke a factor into smaller factors:

$$\begin{array}{r} 9 \times 16 \\ 9 \times (8 \times 2) \\ 72 \times 2 = \underline{144} \end{array}$$

Lisbeth used doubling and halving:

$$\begin{array}{r} 9 \times 16 \\ 18 \times 8 \\ 36 \times 4 \\ 72 \times 2 \\ 144 \times 1 = \underline{144} \end{array}$$

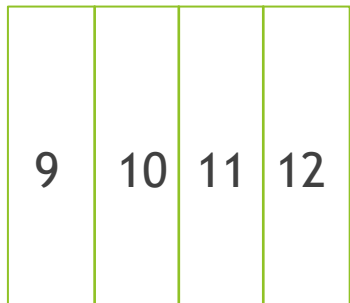
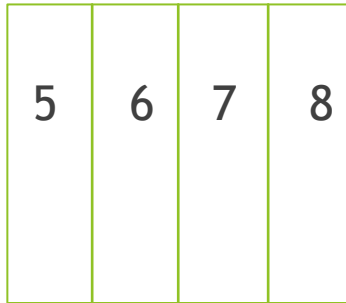
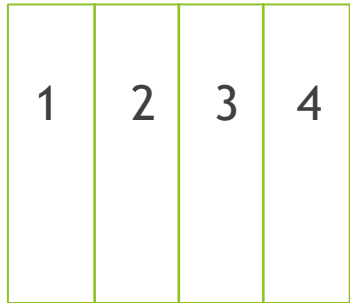
Number Talks: Example Anchor Charts

Math Strategy Modeling

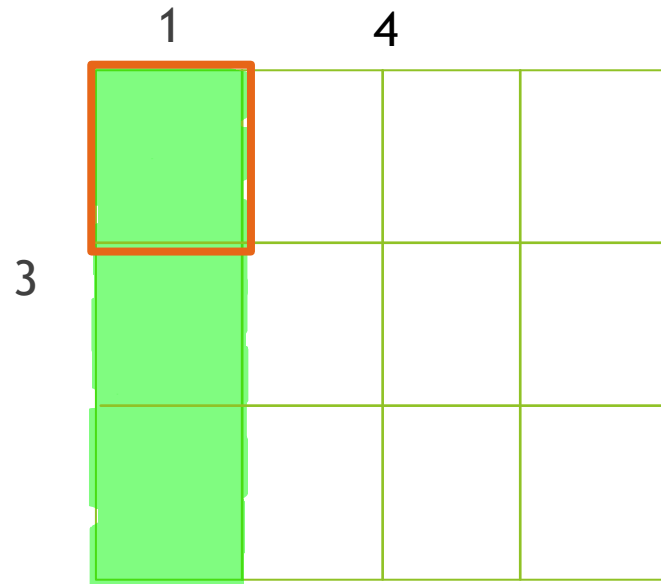
- ▶ Tonight, we will discuss the ways in which we teach our students to solve division with fractions. (Note: the algorithm is taught in 6th grade).
- ▶ MGSE5.NF.7 - Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.
- ▶ Unit Fraction - A unit fraction is any fraction with a numerator of 1.
 - ▶ Ex. - $\frac{1}{2}$, $\frac{1}{8}$, $\frac{1}{12}$, etc.

Division Fractions Models

► $3 \div \frac{1}{4} = 12$



► $\frac{1}{4} \div 3 = \frac{1}{12}$




Fun Ideas for Fact Fluency Practice

- ▶ Dude's Dilemma - <http://teacher.scholastic.com/activities/adventure/math1.htm#>
- ▶ Multiplication War - Use two decks of cards and multiply to get the product. Whoever has the highest product wins.
- ▶ Education Galaxy - My Skill Practice- www.educationgalaxy.com/login
- ▶ Roshambo (Math version of Paper, Rock , Scissors) - Each person puts out a number and the person to say the correct product of the two numbers first wins.
- ▶ Multiplication Roll'Em - Roll a pair of dice and multiply to get the product. Whoever has the highest product wins.
- ▶ Playdough Arrays - Create arrays that match the multiplication fact.
- ▶ Multiplication Songs - Flocabulary, YouTube, School House Rock
- ▶ Tic Tac Times - <https://ipadthinker.com/math/ticTacTimes.html>
- ▶ App- Sushi Monster



Typing Club

- ▶ <https://www.typingclub.com/>
- ▶ Click on  in top right hand corner of webpage
- ▶ Creating a login will allow students to continue their progress the next time they login back in.
- ▶ Georgia Milestones Assessment for 3rd - 5th is administered on the computer. Students must type their constructed responses and the writing component.

Education Galaxy



► www.educationgalaxy.com

Username - Student ID # + hes (lunch #)

Password - Student ID # (lunch #)

Resource for student skill practice at home
in Reading, ELA, and Math

