

@ Home Math ideas

Measurement and Data

- Use construction paper to cut out 4 rectangles of different sizes. Use a ruler to measure the length and width in centimeters. Label each rectangle with its corresponding height and width. Find the area and perimeter of each rectangle.
- Measure the heights of the people in your family. Using the skills you learned in class, find the median, mode, and range of your family's heights.
- Using the length, width, and depth of a garden plot to determine how many bags of garden soil to buy.
- Calculate the volume of your cereal box.
- Find the area of various rooms in the home.
- What types of exercise do your friends enjoy? Take a survey. After you collect your data, create a line plot to display your results.
- Record sunset time each day and identify trends, create line graph of the data, and make predictions.
- Analyze baseball statistics.
- Fitness activities -- how many calories did you burn? Chart your progress.
- When buying pizza, measure the area to find the best deal for small, medium, or large.

www.aMathsDictionaryforKids.com

An animated, interactive dictionary for students which explains over 600 common mathematical terms in simple language.



Layout Design & Collaboration

Janis Heigl
janis@esnorthwest.com

Charlotte Hartman
chartman@iinet.com

Updated October 5, 2013

Source Documents:

Based on Common Core State Standards for Mathematics, June 25, 2010

Adapted from North Dakota Content Standards: "I Can" Statements

Adapted from Arizona Department of Education Mathematics Standards, 2010

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The graphic features the text "Grade 5 CCSS Math Expectations Checklist" in large blue letters. Below the text is a wooden signpost with five directional signs: "Operation and Algebraic Thinking" (yellow), "Number and Operations in Base 10" (red), "Number and Operations Fractions" (blue), "Geometry, Measurement and Data" (green), and "Mathematical Practices" (purple). A large blue number "5" is positioned to the right of the signpost. At the bottom left is a cartoon owl wearing a graduation cap and holding a stack of books. At the bottom right is the "COMMON CORE STATE STANDARDS INITIATIVE" logo with the tagline "PREPARING AMERICA'S STUDENTS FOR COLLEGE & CAREER".

Grade 5

Algebraic Relationships

- Look at and discuss your family's monthly gas, telephone, or electric bill. Write an equation to determine the monthly charge based on usage based on the unit charge.
- Write several different equations on small slips of paper. Write the answers to the equations on separate slips of paper. Pull one slip of paper from each pile at a time. Tell whether the answer shown is a solution to the equation. Repeat until all solutions have been matched with their equations.

Geometry

- Find three items of varying lengths. Make a table. On your table record the unit of measure you would use to measure each item. Then measure the items to the nearest half unit of measure.
- Go for a walk in your neighborhood. How many examples of parallel and perpendicular lines did you see? Draw one or two examples.

Numbers and Operations

- Grocery store ideas -- calculations based on price per pound, price per ounce
- At stores advertising sale, calculate the price with the % off discount.
- When you fill up the car at the gas station, calculate the miles per gallon.
- At the restaurant, ask your child to calculate or estimate a tip.
- Cook together -- double or half the recipe.
- Practice making change.
- Doing arithmetic with decimals, for example when balancing a checkbook.
- Multiplying with fractions — for example, if you used about $\frac{2}{3}$ of a $\frac{3}{4}$ -cup measure of vegetable stock, then how much stock did you use? About how much is left?



My checklist of what I can do in 5th grade math

I understand that it is important to apply the mathematical practices (identified on the inside cover) on a regular basis.

Operations & Algebraic Thinking

Write and interpret numerical expressions: (5.OA.1, 5.OA.2)

- I can use algebraic expressions and evaluate using symbols.
- I can write/explain simple numerical expressions without finding the answer. _____ write _____ explain

Analyze patterns and relationships: (5.OA.3)

- I can create a function table (input/output).
- I can explain the rule.
- I can graph the ordered pairs.
- I can explain my graph.

Number & Operations in Base 10

Understand the place value system: (5.NBT.1, 5.NBT.2, 5.NBT.3, 5.NBT.4)

- I can determine that a digit represents ten times what it would be in the place to its right and one-tenth to its left.
- I can explain the powers of ten.
- I can explain the pattern in placement of a decimal point using a power of ten.
- I can read/write decimals to thousandths using numerals, number names, and expanded form. _____ read _____ write
- I can compare two decimals to thousandths using $<$, $>$, $=$.
- I can round decimals to any place.

Perform operations with multi-digit whole numbers and with decimals to hundredths: (5.NBT.5, 5.NBT.6, 5.NBT.7)

- I can multiply multi-digit of whole numbers.
- I can divide four-digit whole numbers by two-digit whole numbers.
- I can show/explain the results of division using equations, arrays, or area models. _____ show _____ explain

- I can add, subtract, multiply, and divide decimals to the hundredths using various methods.
_____ add _____ subtract
_____ multiply _____ divide
_____ explain how I found the answer

Number & Operations – Fractions

Use equivalent fractions as a strategy to add and subtract fractions: (5.NF.1, 5.NF.2)

- I can use equivalent fractions to add/subtract fractions with unlike denominators.
_____ add _____ subtract
- I can solve word problems involving addition and subtraction of fractions including unlike denominators.
- I can use benchmark fractions and number sense to estimate.
- I can check for the reasonableness of my answers.

Apply and extend previous understandings of multiplication and division to multiply and divide fractions: (5.NF.3, 5.NF.4, 5.NF.5, 5.NF.6, 5.NF.7)

- I can explain a fraction as division of the numerator by the denominator.
- I can solve word problems involving division and write the remainder as a fraction.
- I can explain the product of a whole number and a fraction using a visual fraction model.
- I can explain the product of two fractions using a visual fraction model.
- I can create a story to describe the equations.
- I can find the area of a rectangle with fractional sides by tiling.
- I can show the area is the same as would be found through multiplication.
- I can multiply fractional side lengths to find the area of rectangles.

- I can show fraction products as rectangular areas.
- I can compare the size of a product to the size of one factor based on the size of the other factor without multiplying.
- I can explain why multiplying a number by a fraction greater than 1 results in a product greater than the number.
- I can explain why multiplying a number by a fraction less than 1 results in a product smaller than the number.
- I can solve real-world problems involving multiplication of fractions and mixed numbers using visual fraction models.
- I can explain division of a unit fraction by a whole number.
- I can find the quotient of a division problem for a unit fraction and whole number.
- I can explain division of a whole number by unit fraction
- I can find the quotient of a division problem for a whole number and a unit fraction.
- I can solve real world problems involving division of unit fractions by whole numbers.
- I can solve real world problems involving division of whole numbers by unit fractions.

Geometry

Graph points on the coordinate plane to solve real-world and mathematical problems: (5.G.1, 5.G.2)

- I can identify the parts of a coordinate plane.
- I can plot a given point on the plane using ordered pairs.
- I can represent and interpret real world and math problems by graphing points on the coordinate plane.

Classify two-dimensional figures into categories based on their properties: (5.G.3, 5.G.4)

- I can identify attributes and categories of two-dimensional figures.
- I can classify two-dimensional figures in a hierarchy according to their attributes.

Measurement and Data

Convert like measurement units within a given measurement system: (5.MD.1)

- I can do measurement conversions within the same system.
- I can use these conversions to solve multi-step, real world problems.

Represent and interpret data: (5.MD.2)

- I can make a line plot to display a set of measurements in fractions of a unit ($1/2$, $1/4$, $1/8$).
- I can solve problems with the information on the line plot.

Geometric measurement – understand concepts of volume and relate volume to multiplication and to addition: (5.MD.3, 5.MD.4, 5.MD.5)

- I can use a unit cube to measure volume.
- I can identify the volume of a solid figure in cubic units.
- I can measure volume by counting unit cubes.
- I can find the volume of a right rectangular prism using unit cubes
- I can show volume of a right rectangular prism by multiplying the edge lengths.
- I can show volume of a right rectangular prism by multiplying the height by the area of the base.
- I can use $l \times w \times h$ and $b \times h$ to find volume for right rectangular prisms in real world problems.
- I can find the volume of a solid figure made of two non-overlapping parts by adding the volumes of the two right rectangular prisms in real world problems

How to use checklist:

- Show the date of when you were able to do the math expectation.
- Show an example of what you did in a journal.