

Rock View Elementary School Math Workshop for Parents

Grade k – 5

Math MP₃

1.16.14

It's not that I'm so smart, it's just
that I stay with problems longer.

- Albert Einstein

Outcomes

By the end of this meeting participants will have:

Explored Curriculum 2.0 Math Measurement Topics and key concepts students will learn in Grades k – 5 during the third marking period.

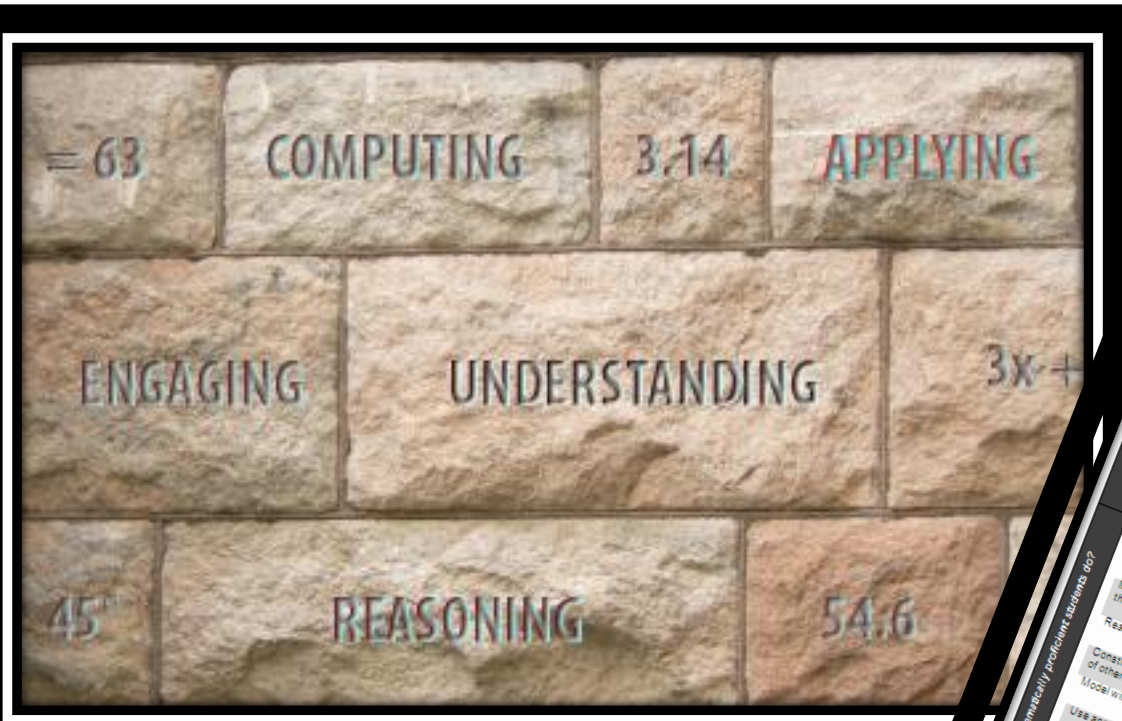
Referenced and defined key vocabulary words and concepts in Grades k - 5 within the third Marking Period.

Investigated and discussed the types of problems that appear in the Common Core State Standards and on the Partnership for Assessment of Readiness for College and Careers (PARCC) tests.

Agenda

- **Measurement Topics & Key Concepts**
- **Vocabulary**
- **Common Core & Partnership for Assessment of Readiness for College and Careers**

Building a Stronger Foundation



Common Core State Standards Mathematical Practices

The goal of the Montgomery County Public Schools Pre-K–12 mathematics program is for all students to achieve mathematical proficiency by developing both conceptual understanding and procedural fluency. The end result is the ability to think and reason mathematically and use mathematics to solve problems in authentic contexts.

— *Elementary* | *Intermediate* | *Curriculum Framework* | *Mathematics Curriculum Framework* | (2016) | Approval: July 2017

STRANDS OF MATHEMATICAL PROFICIENCY

- Computing**
Carrying out mathematical procedures, such as adding, subtracting, multiplying, and dividing numbers and relations—moving fluently, accurately, efficiently, and appropriately.
- Understanding**
Comprehending mathematical concepts, operations and relations—knowing what mathematical symbols, diagrams and procedures mean.
- Applying**
Being able to formulate problems mathematically and to devise strategies for solving them using concepts and procedures appropriately.
- Reasoning**
Using logic to explain and justify a solution to a problem or to extend from something known to something not yet known.
- Engaging**
Seeing mathematics as sensible, useful, and coherent—it just works—and being willing to do the work.

COMMON CORE STATE STANDARDS MATHEMATICAL PRACTICES

What do mathematically proficient students do?

| Practices | Examples |
|---|---|
| Mathematically proficient students: Make sense of problems and persevere in solving them. | Mathematically proficient students: Plan a solution pathway rather than simply jumping into a solution attempt. |
| Reason abstractly and quantitatively. | Attend to the meaning of quantities, not just how to compute them. |
| Construct viable arguments and critique the reasoning of others. | Justify their conclusions, communicate them to others, and respond to the arguments of others. |
| Model with mathematics. | Apply the mathematics they know to solve problems arising in everyday life. |
| Use appropriate tools strategically. | Consider the available tools when solving a mathematical problem, and make sound decisions about when each of these tools might be helpful. |
| Attend to precision. | Calculate accurately and efficiently; give carefully formulated explanations. |
| Look for and make use of structure. | Notice, for example, that 3 and 7 more is the same amount as 7 and 3 more or sort a collection of shapes according to how many sides the shapes have. |
| Look for and express regularity in repeated reasoning. | Look both for general methods and for shortcuts; evaluate the reasonableness of their intermediate results. |

What do mathematically proficient students do?

Grade Level Summaries

Kindergarten Marking Period 3 Math Summary

El Resumen de Matemáticas en Tercer Período de Calificaciones Para Kindergarten

MEASUREMENT TOPICS

Measurement Topics are categories of content and processes in a subject. What a child needs to know and be able to do changes (gets more complex) at each grade level.

- Geometry (MP3 & 4)
- Measurement and Data (MP3 & 4)

TÓPICOS DE MEDICIÓN

TÓPICOS DE MEDICIÓN son categorías relacionadas al contenido y procesos dentro de una materia. Lo que el estudiante necesita saber y debe estudiar cambia (y es más complejo) en cada nivel de grado.

Mathematics

- Measurable attributes
- Length and weight: direct comparison, nonstandard units
- 2- and 3-dimensional shapes: attributes, comparing
- Exploration of shapes: composing and decomposing
- Directional and positional words: describing shapes in the environment

Matemáticas

- Atributos medibles
- Longitud y peso: comparación directa, unidades no estándar
- Formas de dos y tres dimensiones: atributos y comparaciones
- Exploración de formas: componiendo y descomponiendo
- Palabras que describen dirección y posición: describiendo formas en el entorno.

Grade 2 Marking Period 3 Math Summary

El Resumen de Matemáticas en Tercer Período de Calificaciones Para el Grado 2

MEASUREMENT TOPICS

Measurement Topics are categories of content and processes in a subject. What a child needs to know and be able to do changes (gets more complex) at each grade level.

- Measurement and Data (MP3)
- Geometry (MP3 & 4)
- Operations and Algebraic Thinking (MP3 & 4)

TÓPICOS DE MEDICIÓN

TÓPICOS DE MEDICIÓN son categorías relacionadas al contenido y procesos dentro de una materia. Lo que el estudiante necesita saber y debe poder hacer cambia (y es más complejo) en cada nivel de grado.

- Medición y Datos (MP3)
- Geometría (MP 3 & 4)
- Operaciones y Razonamiento Algebraico (MP 3 & 4)

Mathematics

- Number lines to 100 (whole number lengths)
- Linear measurement (units, tools, estimation)
- Addition and subtraction situations involving linear measurement (within 100)
- Time on analog and digital clocks (to nearest 5 minutes)
- Partitioning shapes into halves, thirds, fourths (circles, rectangles)
- Partitioning rectangles, repeated addition (to five rows and five columns)

Matemáticas

- Líneas de números hasta 100 (longitud de números enteros)
- Medidas lineares (unidades, herramientas, estimado) lineal (hasta 100)
- Situaciones de sumas y restas implicando medida lineal (hasta 100)
- La hora en relojes analógicos y digitales (hasta los cinco minutos más próximos)
- Separación de formas en mitades, tercios, cuartos (círculos, rectángulos)
- Separación de rectángulos, suma repetida (hasta cinco líneas y cinco columnas)

Grade 1 Marking Period 3 Math Summary

El Resumen de Matemáticas en Tercer Período de Calificaciones Para el Grado 1

MEASUREMENT TOPICS

Measurement Topics are categories of content and processes in a subject. What a child needs to know and be able to do changes (gets more complex) at each grade level.

- Measurement and Data (MP3)
- Operations and Algebraic Thinking (MP3)

TÓPICOS DE MEDICIÓN

TÓPICOS DE MEDICIÓN son categorías relacionadas al contenido y procesos dentro de una materia. Lo que el estudiante necesita saber y debe poder hacer cambia (y es más complejo) en cada nivel de grado.

- Medición y Datos de información (MP3)
- Operaciones y Razonamiento Algebraico (MP3)

Mathematics

- Direct comparison: ordering objects by length
- Length: nonstandard units
- Relationships and properties of addition and subtraction
- Fact families (sums through 10)
- Addition: the unknown in an equation (concrete models and drawings)
- Addition: 2-digit and drawings) of 10 (concrete models and drawings)
- Subtraction: 2-digit multiples of 10 (concrete models and drawings)

Matemáticas

- Comparación directa: ordenando objetos por longitud
- Longitud: unidades no estándares
- Relaciones y propiedades de la suma y la resta

Grade 3 Marking Period 3 Math Summary

El Resumen de Matemáticas en Tercer Período de Calificaciones Para el Grado 3

MEASUREMENT TOPICS

Measurement Topics are categories of content and processes in a subject. What a child needs to know and be able to do changes (gets more complex) at each grade level.

- Numbers and Operations in Base Ten (MP3)
- Number and Operations—Fractions (MP3)
- Measurement and Data (MP3 & 4)
- Operations and Algebraic Thinking (MP 3 & 4)

TÓPICOS DE MEDICIÓN

TÓPICOS DE MEDICIÓN son categorías relacionadas al contenido y procesos dentro de una materia. Lo que el estudiante necesita saber y debe poder hacer cambia (y es más complejo) en cada nivel de grado.

- Números y Operaciones en el Sistema Decimal (MP3)
- Números y Operaciones—Fracciones (MP3)
- Medición y Datos (MP 3 & 4)
- Operaciones y Razonamiento Algebraico (MP 3 & 4)

Mathematics

- Fraction representations on a number line
- Linear measurement: nearest half and fourth of an inch
- Measurement data: line plots
- Equivalent fractions: visual fraction models, number line models
- Comparison of fractions: same numerator or same denominator
- Fractions representations of whole numbers
- Multiplication and division fluency (within 100; facts with 0 to 10)
- Multiplication: 1-digit numbers by multiples of 10 (10 to 90)

*Grade 3 limited to denominators of 2, 3, 4, 6, 8

Matemáticas

- Representaciones fraccionarias en una línea numérica
- Medición lineal: medio y cuarto más próximo a una pulgada
- Datos de medición: gráficos de líneas
- Fracciones equivalentes: modelos fraccionarios visuales, modelos de rectas numéricas
- Comparación de fracciones: igual numerador o igual denominador
- Representaciones de números enteros en fracciones con 0 hasta 10
- Multiplicación: números de 1 dígito por múltiplos de 10 (10 a 90)

*Grado 3 limitado a denominadores de 2, 3, 4, 6, 8

KINDERGARTEN MEASUREMENT TOPICS

Geometry

Measurement and Data

Kindergarten Marking Period 3 Math Summary

El Resumen de Matemáticas en Inglés Período de Calificación Tres Kindergarten

MEASUREMENT TOPICS

Measurement Topics are categories of content and practice standards that a child must be able to use in all shapes and sizes, lengths of each grade level.

- Geometry (G) 1 & 2
- Measurement and Data (M) 1 & 2

TEMAS DE MEDICIÓN

TEMAS DE MEDICIÓN son categorías de contenido y prácticas estándares que un niño debe ser capaz de utilizar en todas las formas y tamaños, longitudes de cada nivel de grado.

- Geometría (G) 1 & 2
- Medición y Datos (M) 1 & 2

Mathematics

- Measurable attributes
- Length and weight: direct comparison, nonstandard units
- 2- and 3-dimensional shapes: attributes, comparing
- Exploration of shapes: composing and decomposing
- Directional and positional words: describing shapes in the environment

Mathematics

- Atributos medibles
- Longitud y peso: comparación directa, unidades no estándar
- Formas bidimensionales y tridimensionales: atributos, comparación
- Exploración de formas: composición y descomposición
- Palabras de posición y dirección: describiendo formas en el entorno

Mathematics

- Measurable attributes
- Length and weight: direct comparison, nonstandard units
- 2- and 3-dimensional shapes: attributes, comparing
- Exploration of shapes: composing and decomposing
- Directional and positional words: describing shapes in the environment

GRADE 1 MEASUREMENT TOPICS

Measurement and Data

Operations and Algebraic Thinking

Mathematics

- Direct comparison: ordering objects by length
- Length: nonstandard units
- Relationships and properties of addition and subtraction
- Fact families (sums through 10)
- Finding the unknown in an equation
- Addition: 1-digit to 2-digit numbers (concrete models and drawings)
- Addition: 2-digit numbers to 2-digit multiples of 10 (concrete models and drawings)
- Subtraction: 2-digit multiples of 10 (concrete models and drawings)

Grade 1 Marking Period 3 Math Summary

Resumen de Matemáticas en Tercer Período de Calificaciones Para el Grado 1

MEASUREMENT TOPICS

Measurement Topics are categories of content and processes in a subject. What a child needs to know and be able to do changes (gets more complex) at each grade level.

- Measurement and Data (MP3)
- Operations and Algebraic Thinking (MP3)

TEMAS DE MEDICIÓN

TEMAS DE MEDICIÓN son categorías relacionadas al contenido y procesos dentro de una materia. Lo que el estudiante necesita saber y debe poder hacer cambia (y es más complejo) en cada nivel de grado.

- Medición y Datos de información (MP3)
- Operaciones y Razonamiento Algebraico (MP3)

Mathematics

- Direct comparison: ordering objects by length
- Length: nonstandard units
- Relationships and properties of addition and subtraction
- Fact families (sums through 10)
- Finding the unknown in an equation
- Addition: 1-digit to 2-digit numbers (concrete models and drawings)
- Addition: 2-digit numbers to 2-digit multiples of 10 (concrete models and drawings)
- Subtraction: 2-digit multiples of 10 (concrete models and drawings)

Matemáticas

- Comparación directa: ordenando objetos por longitud
- Longitud: unidades no estándares
- Relaciones y propiedades de la suma y la resta
- Familias de números (sumas hasta el 10)
- Encontrando el factor desconocido en una ecuación
- Suma: números de 1 a 2 dígitos (modelos concretos y dibujos)
- Suma: números de 2 dígitos a múltiplos de 10 de 2 dígitos (modelos concretos y dibujos)
- Resta: múltiplos de 10 de 2 dígitos (modelos concretos y dibujos)

GRADE 2 MEASUREMENT TOPICS

Measurement and Data

Geometry

Operations and Algebraic Thinking

Grade 2, Marking Period 3 Math Summary

El Resumen de Matemáticas en Tercer Período de Calificaciones Para el Grado 2

MEASUREMENT TOPICS

Measurement Topics are categories of content and processes in a subject. What activities students do and be able to do change (get more complex) at each grade level.

- Measurement and Data (MP1)
- Geometry (MP1 & 4)
- Operations and Algebraic Thinking (MP3 & 4)

TEMAS DE MEDICIÓN

TEMAS DE MEDICIÓN son categorías relacionadas al contenido y procesos dentro de una materia. Lo que el estudiante necesita saber y debe poder hacer cambia (y es más complejo) en cada nivel de grado.

- Medición y Datos (MP1)
- Geometría (MP 3 & 4)
- Operaciones y Pensamiento Algebraico (MP 3 & 4)

Mathematics

- Number lines to 100 (whole number lengths)
- Linear measurement (units, tools, estimation)
- Addition and subtraction situations involving linear measurement (within 100)
- Time on analog and digital clocks (to nearest 5 minutes)
- Partitioning shapes into halves, thirds, fourths (circles, rectangles)
- Partitioning rectangles, repeated addition (up to five rows and five columns)

Matemáticas

- Línea de números hasta 100 (longitud de números enteros)
- Medida lineal (unidades, herramientas, estimación)
- Situaciones de suma y resta implicando medida lineal (dentro 100)
- La hora en relojes analógico y digital (hasta los cinco minutos más próximas)
- Separación de formas en mitades, tercios, cuartos (círculos, rectángulos)
- Separación de rectángulos, suma repetida (hasta cinco filas y cinco columnas)

Mathematics

- Number lines to 100 (whole number lengths)
- Linear measurement (units, tools, estimation)
- Addition and subtraction situations involving linear measurement (within 100)
- Time on analog and digital clocks (to nearest 5 minutes)
- Partitioning shapes into halves, thirds, fourths (circles, rectangles)
- Partitioning rectangles, repeated addition (up to five rows and five columns)

Grade 3 MEASUREMENT TOPICS

Numbers and Operations in Base Ten
Number and Operations – Fractions
Measurement and Data
Operations and Algebraic Thinking

Mathematics

- Fraction representations* on a number line
- Linear measurement: nearest half and fourth of an inch
- Measurement data: line plots
- Equivalent fractions*: visual fraction models, number line models
- Comparison of fractions*: same numerator or same denominator
- Fraction representations of whole numbers
- Multiplication and division fluency (within 100): facts with 0 to 10
- Multiplication: 1-digit numbers by multiples of 10 (10 to 90)

*Grade 3 limited to denominators of 2, 3, 4, 6, 8

Grade 3 Marking Period 3 Math Summary

El Resumen de Matemáticas en Tercer Período de Calificaciones Para el Grado 3

MEASUREMENT TOPICS

Measurement Topics are categories of content and processes in a subject. If a child needs to learn and be able to do changes, (per more complete) or not (practical).

- Numbers and Operations in Base Ten (NBT)
- Number and Operations – Fractions (NF)
- Measurement and Data (MD) 2, 4)
- Operations and Algebraic Thinking (OA) 3, 6, 4)

TÓPICOS DE MEDICIÓN

TÓPICOS DE MEDICIÓN son categorías relacionadas al contenido y procesos dentro de una materia. Lo que el estudiante necesita saber y debe poder hacer (cambiar) o no (práctico) en su vida real de grado.

- Números y Operaciones en el Sistema Decimal (NBT)
- Números y Operaciones – Fracciones (NF)
- Medición y Datos (MD) 2, 4, 4)
- Operaciones y Pensamiento Algebraico (OA) 3, 6, 4)

Mathematics

- Fraction representations* on a number line
- Linear measurement: nearest half and fourth of an inch
- Measurement data: line plots
- Equivalent fractions*: visual fraction models, number line models
- Comparison of fractions*: same numerator or same denominator
- Fraction representations of whole numbers
- Multiplication and division fluency (within 100): facts with 0 to 10
- Multiplication: 1-digit numbers by multiples of 10 (10 to 90)

*Grade 3 limited to denominators of 2, 3, 4, 6, 8

Matemáticas

- Representación fraccionaria* en una línea numérica
- Medición lineal: medio y cuarto más próximo a un pulgada
- Datos de medición: gráficos de línea
- Fracciones equivalentes*: modelos fraccionarios visuales, modelos de línea numérica
- Comparación de fracciones*: igual numerador e igual denominador
- Representación de números enteros en fracciones
- Fluidez para multiplicar y dividir (dentro hasta 100) problemas con 0 hasta 10
- Multiplicación número de 1 dígito por múltiplos de 10 (10 a 90)

*Grado 3 limitado a denominadores de 2, 3, 4, 6, 8

Grade 4 MEASUREMENT TOPICS

Operations and Algebraic Thinking
Number and Operations – Fractions
Measurement and Data
Geometry

MATHEMATICS

Operations and Algebraic Thinking:

- Determine factor pairs, multiples, prime and composite numbers within 100.

Number and Operations—Fractions:

- Recognize and generate equivalent fractions; compare fractions using common numerators, common denominators, or benchmarks (0, 1/2, 1); decompose a fraction into a sum of fractions in more than one way add and subtract fractions, including mixed numbers, with like denominators; solve word problems involving addition and subtraction of fractions; multiply a fraction by a whole number; solve word problems involving multiplication of a fraction and a whole number (Grade 4 limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 100).

Measurement and Data:

- Solve measurement word problems involving addition, subtraction, and multiplication of distances, intervals of time, masses of objects, and line plots.

Geometry:

- Draw and identify line segments and lines, including perpendicular lines, parallel lines, and lines of symmetry.

Grade 4 Math Summary

El Resumen de Matemáticas Para el Grado 4

Marking Period 3

Tercer Período de Calificaciones

| Measurement Topics | MATHEMATICS |
|---|---|
| <p>Measurement Topics</p> <p>Measurement Topics are categories of content and practices in a subject. What a child needs to know and be able to do changes (over time) complex) at each grade level.</p> <p>-Operations and Algebraic Thinking</p> <p>-Number and Operations—Fractions</p> <p>-Measurement and Data</p> <p>-Geometry</p> | <p>Operations and Algebraic Thinking:</p> <ul style="list-style-type: none">• Determine factor pairs, multiples, prime and composite numbers within 100. <p>Number and Operations—Fractions:</p> <ul style="list-style-type: none">• Recognize and generate equivalent fractions; compare fractions using common numerators, common denominators, or benchmarks (0, 1/2, 1); decompose a fraction into a sum of fractions in more than one way add and subtract fractions, including mixed numbers, with like denominators; solve word problems involving addition and subtraction of fractions; multiply a fraction by a whole number; solve word problems involving multiplication of a fraction and a whole number (Grade 4 limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 100). <p>Measurement and Data:</p> <ul style="list-style-type: none">• Solve measurement word problems involving addition, subtraction, and multiplication of distances, intervals of time, masses of objects, and line plots. <p>Geometry:</p> <ul style="list-style-type: none">• Draw and identify line segments and lines, including perpendicular lines, parallel lines, and lines of symmetry. |
| <p>Tópicos De Medición</p> <p>TÓPICOS DE MEDICIÓN son categorías relacionadas al contenido y prácticas dentro de una materia. Lo que el estudiante necesita saber y debe poder hacer cambia (o se hace complejo) en cada nivel de grado.</p> <p>-Operaciones y Pensamiento Algebraico</p> <p>-Número y Operaciones—Fracciones</p> <p>-Medición y Datos</p> <p>-Geometría</p> | <p>MATEMÁTICAS</p> <p>Operaciones y Pensamiento Algebraico:</p> <ul style="list-style-type: none">• Determinar pares de factores, múltiplos, números primos y compuestos dentro de 100. <p>Número y Operaciones—Fracciones:</p> <ul style="list-style-type: none">• Reconocer y generar fracciones equivalentes; comparar fracciones usando comunes numeradores, comunes denominadores, o puntos de referencia (0, 1/2, 1); descomponer una fracción en una suma de fracciones en más de una forma (por ejemplo, $2/8 + 3/8 = 5/8 = 1/2 + 1/8$); sumar y restar fracciones, incluyendo números mixtos, con denominadores iguales; resolver problemas escritos que envuelven suma y resta de fracciones; multiplicar una fracción por un número entero; resolver problemas escritos que envuelven multiplicación de una fracción por un número entero (Grado 4 limitado a denominadores de 2, 3, 4, 5, 6, 8, 10, 12, 100). <p>Medición y Datos:</p> <ul style="list-style-type: none">• Resolver problemas escritos de medidas que envuelven suma, resta, y multiplicación de distancias, intervalos de tiempo, masa de objetos, y gráficos de líneas. <p>Geometría:</p> <ul style="list-style-type: none">• Dibujar e identificar segmentos lineales y líneas, incluyendo líneas perpendiculares, líneas paralelas, y líneas de simetría. |

Adapted by Rock Vista Elementary School for 2013-14 "Math Workshop for Parents"

Grade 5 MEASUREMENT TOPICS

Number and Operations – Fractions Measurement and Data

MATHEMATICS

Numbers and Operations–Fractions:

- Use equations, area models, and number line models to multiply a whole number or a fraction by a fraction, including mixed numbers
- Interpret multiplication as resizing
- Apply and extending previous understandings to divide unit fractions by whole numbers and whole numbers by unit fractions
- Interpret fractions as division of numerator by denominator
- Solve word problems involving multiplication and division of fractions.

Measurement and Data:

Solve measurement problems involving line plots.

Grade 5 Math Summary

El Resumen de Matemáticas Para el Grado 5

Marking Period 3

Tercer Período de Calificaciones

MATHEMATICS

Measurement

TOPICS
Mediciones: Tópicos son categorías de contenidos y procesos de solución. Ellos a veces se ven y a veces se abstrayen de cambiar. (pero más ejemplos en cada nivel de grado)

-Number and Operations—
Fractions:

-Measurement and Data

Tópicos De Medición

TÓPICOS DE MEDICIÓN
son categorías relacionadas al contenido y procesos dentro de una materia. Lo que es relevante acerca de saber y cómo poder hacer cambios (y más ejemplos) en cada nivel de grado

-Números y Operaciones—
Fracciones:

-Medición y Datos

Numbers and Operations–Fractions:

- Use equations, area models, and number line models to multiply a whole number or a fraction by a fraction, including mixed numbers
- Interpret multiplication as resizing
- Apply and extending previous understandings to divide unit fractions by whole numbers and whole numbers by unit fractions
- Interpret fractions as division of numerator by denominator
- Solve word problems involving multiplication and division of fractions.

Measurement and Data:

Solve measurement problems involving line plots.

MATEMÁTICAS

Números y Operaciones—Fracciones:

- Usar ecuaciones, modelos de área, y modelos de recta numérica para multiplicar un número entero o una fracción por una fracción, incluyendo números mixtos
- Interpretar la multiplicación como modificador de tamaño
- Aplicar y extender entendimientos previos, para dividir fracciones de unidades entre números enteros y números enteros entre fracciones de unidades
- Interpretar las fracciones como divisiones de numeradores y denominadores
- Resolver problemas escritos que involucren multiplicación y división de fracciones.

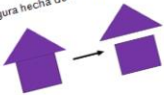
Medición y Datos:

- Resolver problemas de medición que involucren gráficos de líneas.

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KINDERGARTEN MCCSC VOCABULARY
Marking Period 3

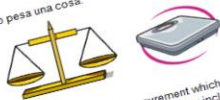
composite figure: a figure that is made up of two or more geometric figures.
Formas compuestas: Una figura hecha de 2 o más figuras geométricas.



attribute: A characteristic of an object such as color, shape, size, etc.
Atributo: Una característica de un objeto tal como color, forma, tamaño, etc.
length: A measure of how long something is.
Longitud: Cuan largo es algo.



weight: A measure of how heavy something is.
Peso: Medida de cuánto pesa una cosa.

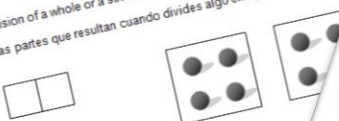


non-standard units of measure: units of measurement which are not included in Metric or Customary Measurement Systems. They include paperclips, spans, snap cubes, color tiles, or any object that can be aligned to what is being measured so that the student can then count to find the length or weight. Example: the student desk might be 20 paper clips long.

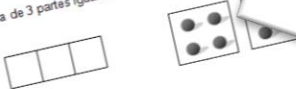
line plot: a visual display of a distribution of data values where each value is shown by a mark (symbol) above a number line. (Also referred to as a dot plot.)
Diagrama de puntos: Diagrama que muestra datos en una recta numérica.



halves: division of a whole or a set into two equal parts.
Mitades: Las partes que resultan cuando divides algo en 2 partes iguales.



thirds: division of a whole or a set into three equal parts.
Tercios: Una de 3 partes iguales.



UNILEVEL: 1 MULTICULTURAL VOCABULARY
Marking Period 3

inverse operations: two operations that undo each other. Addition and subtraction are inverse operations. Multiplication and division are inverse operations.
Examples: $4 + 5 = 9$, $9 - 5 = 4$ $6 \times 5 = 30$, $30 \div 5 = 6$

Operaciones Inversas: Dos operaciones que se anulan a sí mismas. La suma y la resta son operaciones inversas.
Ejemplo: $4 + 5 = 9$, $9 - 5 = 4$ $6 \times 5 = 30$, $30 \div 5 = 6$

fact family: a collection of related addition and subtraction facts, or multiplication and division facts, made from the same numbers. For 7, 8, and 15, the addition/subtraction fact family consists of $7 + 8 = 15$, $8 + 7 = 15$, $15 - 8 = 7$, and $15 - 7 = 8$. For 5, 6, and 30, the multiplication/division fact family consists of $5 \times 6 = 30$, $6 \times 5 = 30$, $30 \div 5 = 6$, and $30 \div 6 = 5$.

FactorData familiar: una colección de factores relacionados de suma y resta o de multiplicación y división, hechos con los mismos números. Para 7, 8 y 15, los factores familiares de la suma/resta consisten en $7 + 8 = 15$, $8 + 7 = 15$, $15 - 8 = 7$, y $15 - 7 = 8$. Para 5, 6 y 30, la multiplicación/división, el factor familiar consiste en $5 \times 6 = 30$, $6 \times 5 = 30$, $30 \div 5 = 6$, y $30 \div 6 = 5$.

solving for unknown value in an equation: identifying a missing number in an equation. For example: A girl had 2 apples and then her friend gave her some more. She now has 5 apples. How many apples did her friend give her? $2 + x = 5$

Invented, flexible algorithms: use of expanded form, numbers and compensation.

transitivity: logical argument several items or number, length of object A and then the length of object B.

nonstandard units of measure: Metric or Customary Measurement Systems. They include paperclips, spans, snap cubes, color tiles, or any object that can be aligned to what is being measured so that the student can then count to find the length or weight. Example: the student desk might be 20 paper clips long.

GRADE 3 MCCSC VOCABULARY
Marking Period 3

Identify Property: In addition, any number added to zero equals that number.
Example: $8 + 0 = 8$
In multiplication, any number multiplied by one equals that number. Example: $8 \times 1 = 8$

Propiedad de Identidad: En suma, cualquier número sumado con cero es igual a ese número. Ejemplo: $8 + 0 = 8$
En multiplicación, cualquier número multiplicado por uno es igual a ese número. Ejemplo: $8 \times 1 = 8$

Commutative Property: In both addition and multiplication, changing the order of the factors when adding or multiplying will not change the sum or the product.
Example: $2 + 3 = 5$ and $3 + 2 = 5$, $3 \times 7 = 21$ and $7 \times 3 = 21$

Propiedad Comutativa: En ambas, suma y multiplicación, cambiando el orden de los factores cuando sumamos o multiplicamos, no cambiara la suma o el producto.
Ejemplo: $2 + 3 = 5$ y $3 + 2 = 5$, $3 \times 7 = 21$ y $7 \times 3 = 21$

Associative Property: in addition and multiplication, changing the grouping of elements being added or multiplied will not change the sum or the product.
Examples: $(2 + 3) + 7 = 12$ and $2 + (3 + 7) = 12$, $(2 \times 3) \times 5 = 30$ and $2 \times (3 \times 5) = 30$

Propiedad Asociada: En suma y multiplicación, cambiando los elementos en el grupo siendo sumados o multiplicados, no cambiara la suma o el producto.
Ejemplos: $(2 + 3) + 7 = 12$ y $2 + (3 + 7) = 12$, $(2 \times 3) \times 5 = 30$ y $2 \times (3 \times 5) = 30$

Distributive Property: a property that relates two operations on numbers, usually multiplication and addition or multiplication and subtraction. This property gets its name because it "distributes" the factor outside the parentheses over the two terms within the parentheses. Examples:
 $2 \times (7 + 4) = (2 \times 7) + (2 \times 4)$
 $(2 \times 4) \times 11 = 14 + 8$
 $22 = 22$

Propiedad Distributiva: La propiedad que relaciona dos operaciones sobre un número, usualmente multiplicación y suma, o multiplicación y resta. Esta propiedad

$$2 \times (7 + 4) = (2 \times 7) + (2 \times 4)$$

$$2 \times 3 = 14 - 8$$

$$6 = 6$$

Grade Level Vocabulary

Curriculum 2.0 Vocabulary

“Vocabulary words are the building blocks of the internal learning structure. Vocabulary is also the tool to better define a problem, seek more accurate solutions, etc.”

— [Ruby K. Payne, *Bridges Out of Poverty: Strategies for Professionals and Communities*](#)

Kindergarten

Marking Period 3 Vocabulary

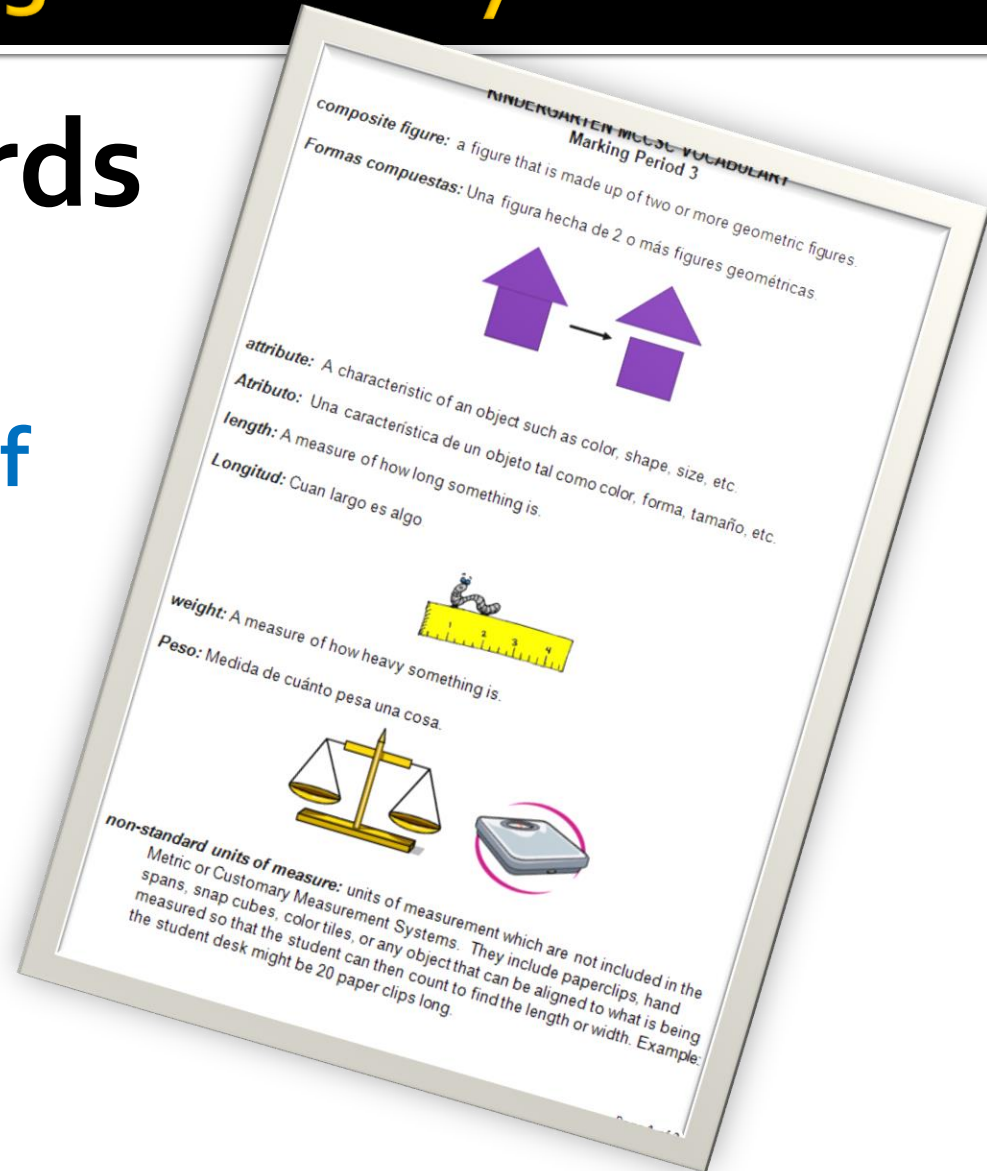
Highlighted Words

Non-Standard Unit of
Measure

Plane

Composite Figure

Attribute



Grade 1

Marking Period 3 Vocabulary

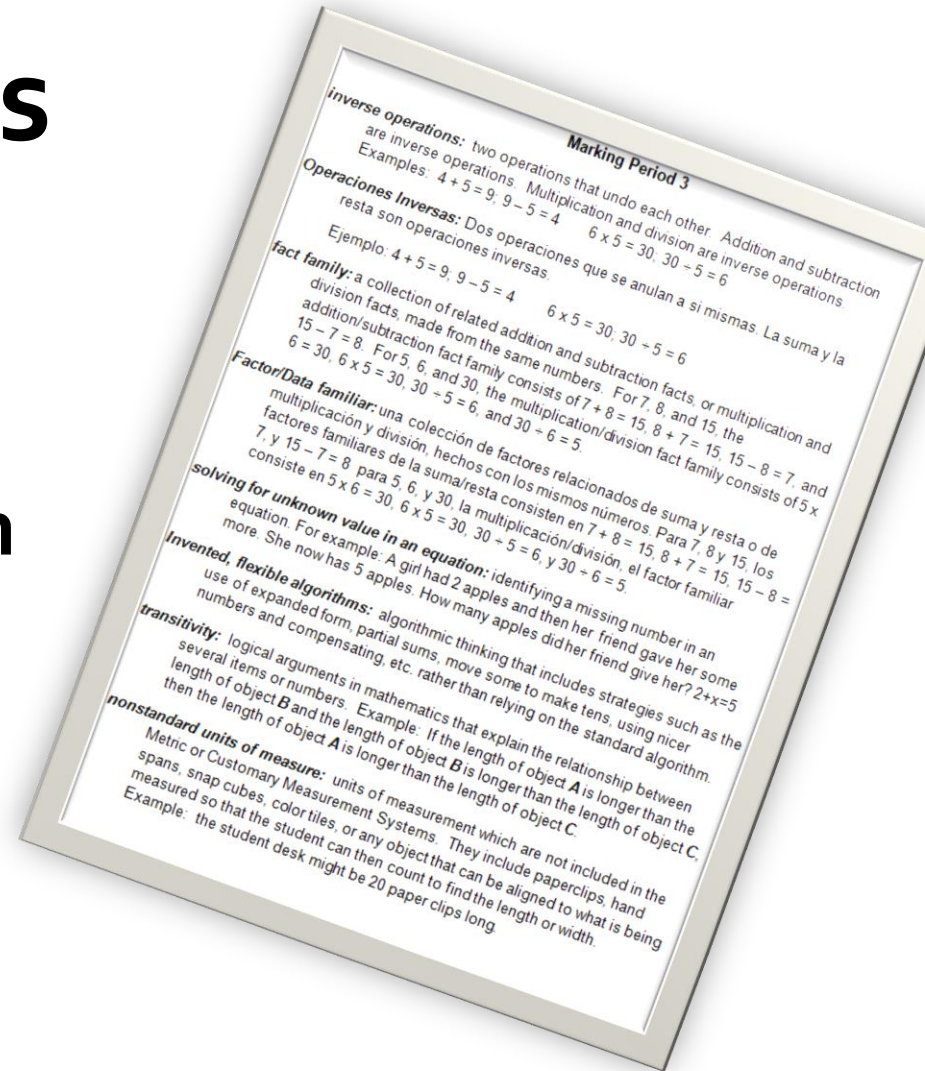
Highlighted Words

Fact Family

Solving for an unknown in an equation

Transitivity

Iterating



Grade 2

Marking Period 3 Vocabulary

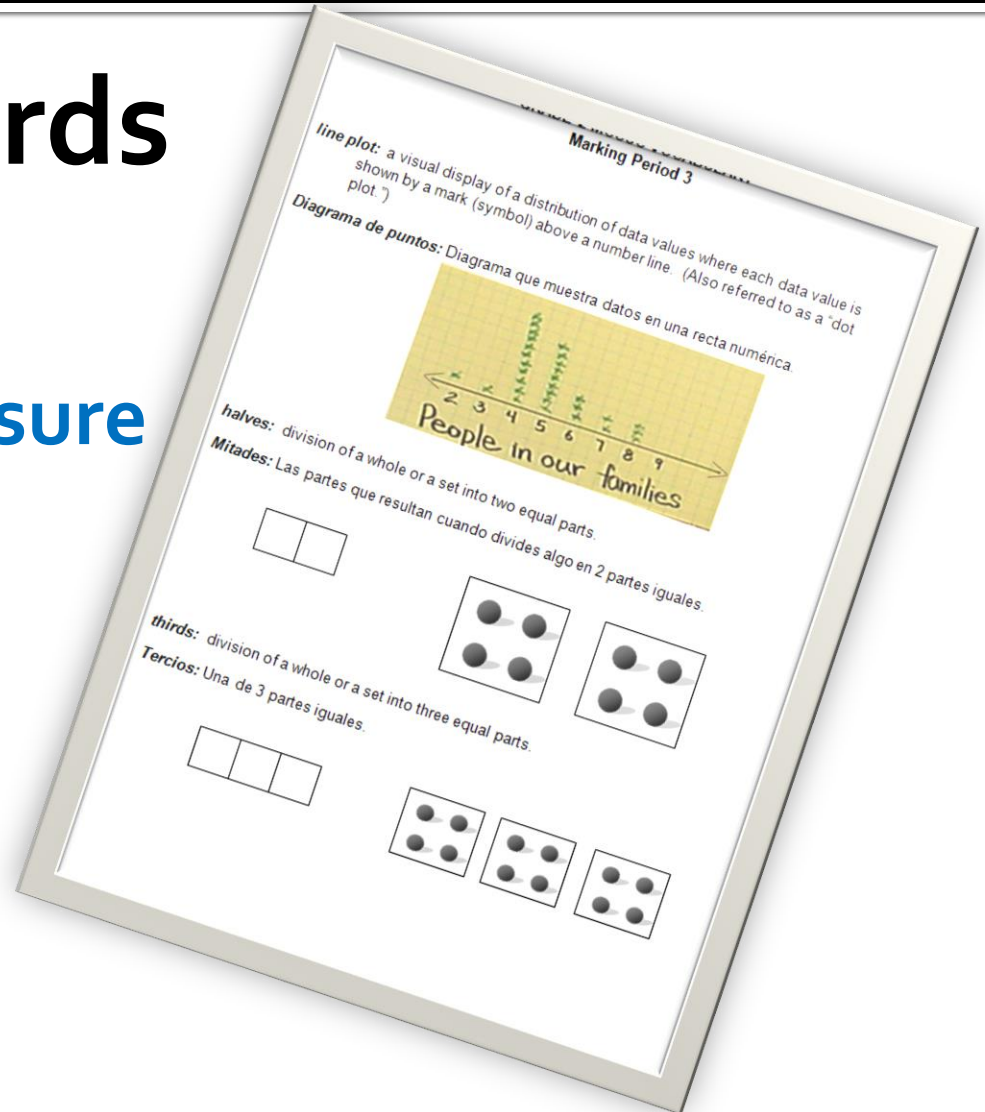
Highlighted Words

Standard Units of Measure

Line plot

Partitioning

Analog Clock



Grade 3

Marking Period 3 Vocabulary

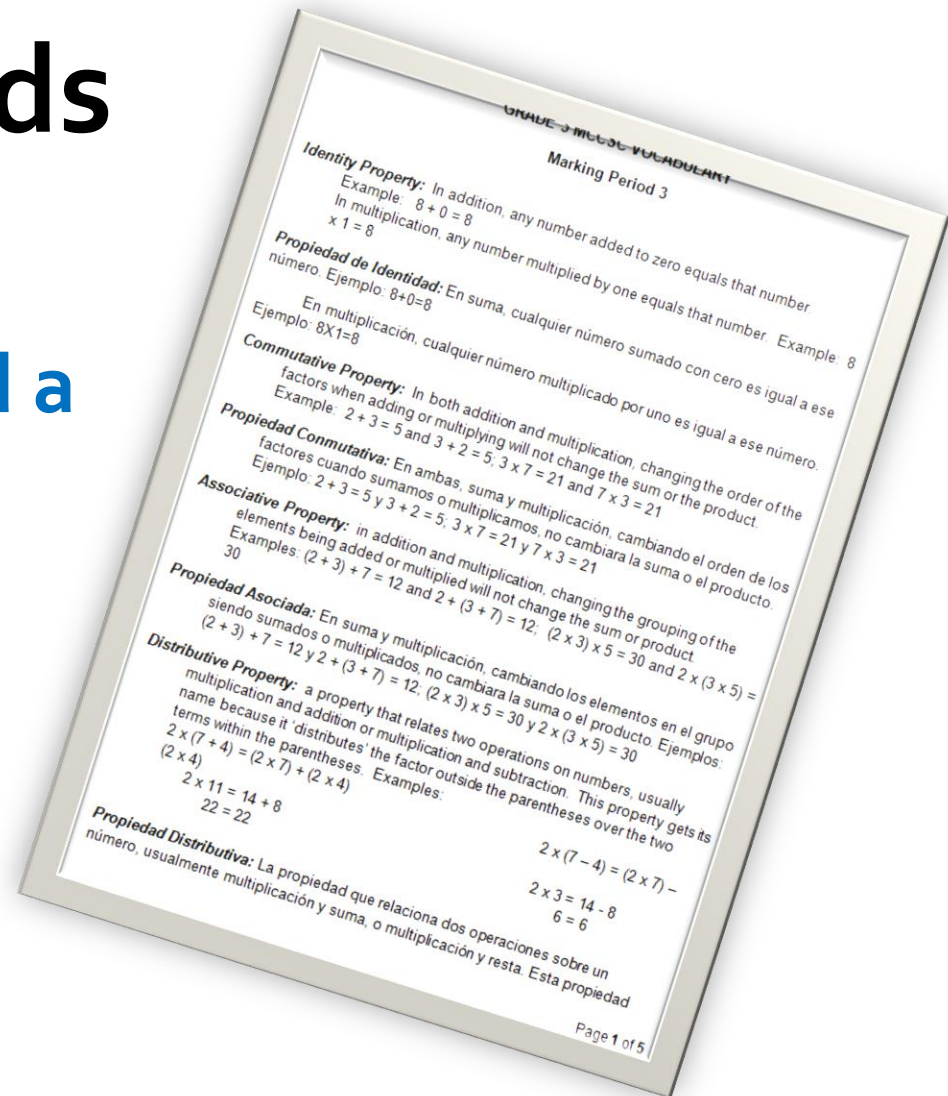
Highlighted Words

Fraction of a Region and a Set

Unit fraction

Linear models

Equivalent fraction



Grade 4

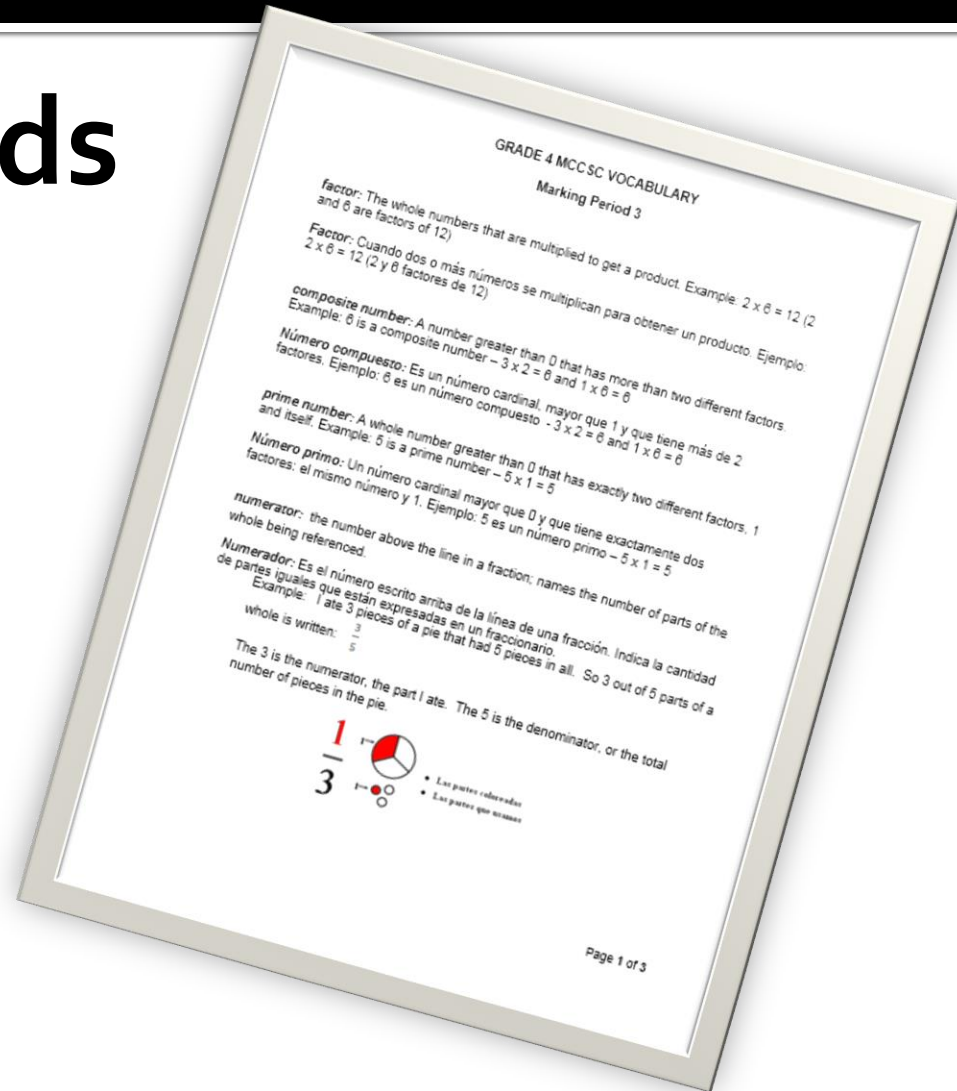
Marking Period 3 Vocabulary

Highlighted Words

Factor

Prime

Composite



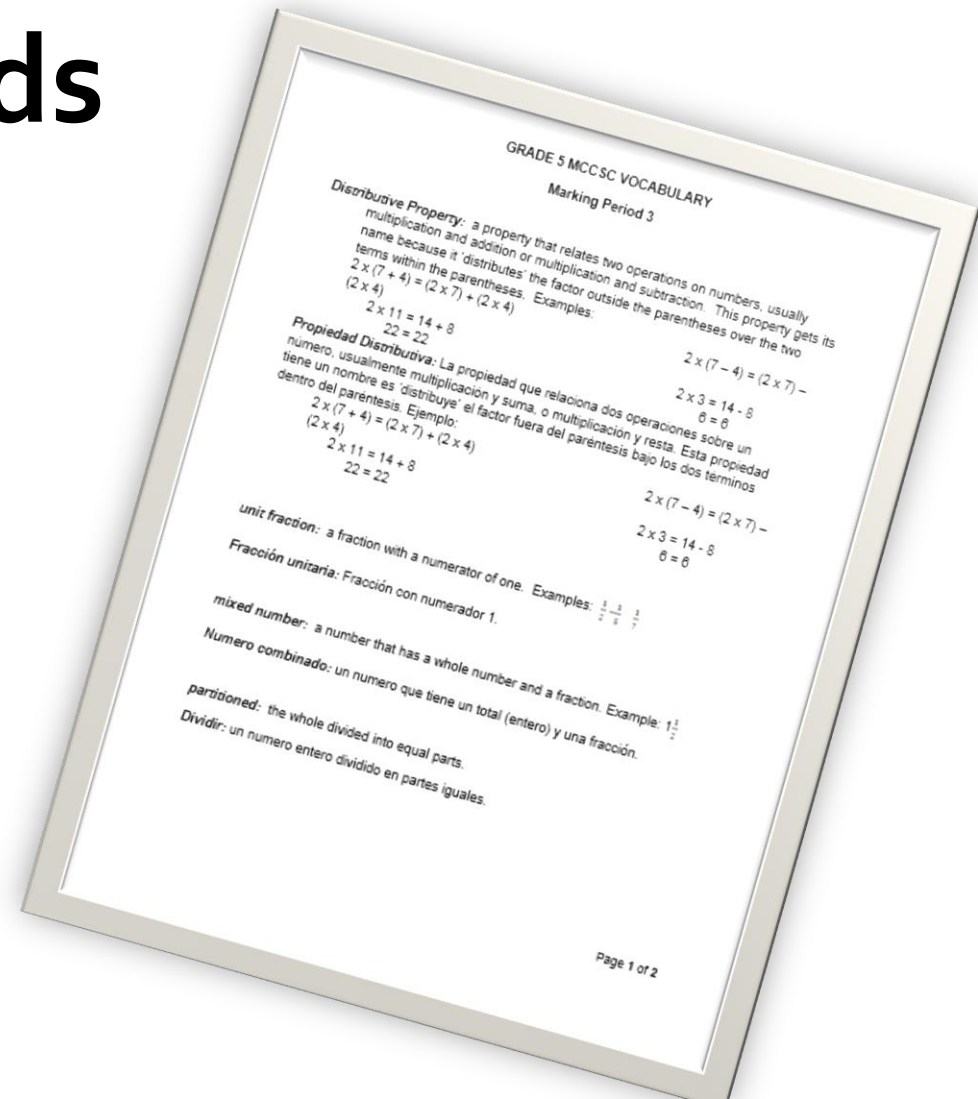
Grade 5

Marking Period 3 Vocabulary

Highlighted Words

Mixed Number

Unit fraction



PARCC Introduction for Math

- Aligned to Common Core State Standards
- Implementation school year 2014-15
- Computer based
- Multi-component
- 3 Types of Tasks

Higher Expectations

Math

Solve problems: content and mathematical practice

Reason mathematically

Model real-world problems

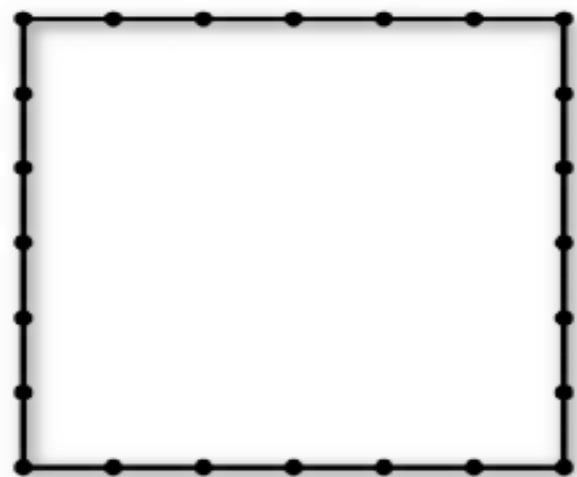
Have fluency with mathematics

Type I: *Tasks assessing concepts, skills and procedures*

Janice has a square wooden board with dimensions 1 foot by 1 foot.

She wants to make a rectangular sign with dimensions $\frac{5}{6}$ foot by $\frac{2}{3}$ foot by making two straight cuts to the board.

The square represents a 1-foot by 1-foot square. You may want to use the square to decide where to make the two cuts by drawing two lines. Click on 2 pairs of opposite points to draw the lines where Janice can make the cuts.



What will be the area, in square feet, of the rectangular sign?

Give your answer as a fraction.

Type II: Tasks assessing expressing mathematical reasoning

Flower gardens (grade 3)

◀ About the task CCSSM Alignment Part a Part b Part c Scoring ▶

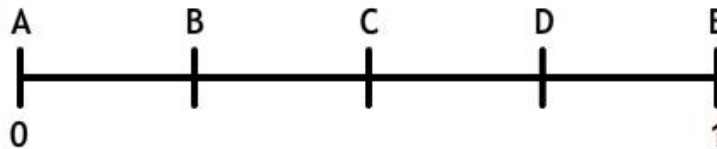
The picture shows Mark's flower garden.

Fill in the blank to make a fraction that represents the part of Mark's garden that is covered with flowers.



$\frac{6}{\square}$

Which letter represents this fraction's location on the number line?



Your answer:

Submit Answer



Type II: Tasks assessing expressing mathematical reasoning (continued)

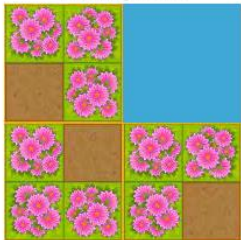
Julia is planting flowers. She wants to cover $\frac{3}{4}$ of the garden with flowers.

Drag a tile onto Julia's garden that will finish covering $\frac{3}{4}$ of her garden with flowers.

Possible tiles:



Julia's garden



Submit Answer

Julia wants to plant flowers in a second garden, but she has not started yet.

Drag a **different** tile to each part of Julia's garden so that $\frac{1}{2}$ of her garden is covered with flowers.

Possible tiles:



Julia's garden



Submit Answer

Type III: *Tasks assessing modeling & applications*

Ms. Morales has a bag of beads.

- She gives Elena 5 beads.
- She gives Damian 8 more beads than Elena.
- She gives Trish 4 times as many beads as Damian.

Ms. Morales then has 10 beads left in the bag.

Part A

How many beads did Damian and Trish each receive? Show or explain how you arrived at each answer.

Cut Paste Undo Redo

Part B

How many beads were in Ms. Morales' bag before any beads were given to students?

beads

Source

:

Activities

Take-home games for MP3
available at Grade Level Tables

Virtual Manipulatives

Sample PARCC Items

Closure & Feedback

- Please complete and return the Math Night Survey at the end of the evening.
- Make sure to pick up any documents from today's information session
- Look for information for Marking Period 4 Parent Workshop

Thank you

Thank You



