

**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

<b>Everyday Math</b> (see key for D,D,S)	<b><u>KINDERGARTEN</u></b>
	<b>NUMBER SENSE, COMPUTATION, &amp; OPERATIONS</b>
	<b>1. Number Sense</b>
	<b>Counting</b>
	The student will:
<b>B/D</b>	K.1 Count forward to 31, backward from 10
<b>D</b>	K.1 Count number of objects in a set and identify quantity (one-to one correspondence)
	<b>Reading and Writing</b>
<b>D</b>	K.1.3 Read and write numerals, 0-10
	<b>Place Value</b>
	(No standards included under this heading.)
	<b>Comparing and Ordering Numbers</b>
<b>B</b>	K.1.5 Compare the number of objects in two or more sets (greater than, less than, equal to)
<b>B</b>	K.1.6 Given a number, identify one more or one less
	<b>Equivalence</b>
	(No standards included under this heading.)
	<b>Rounding</b>
	(No standards included under this heading.)
	<b>Meaning of Fractions</b>
<b>B</b>	K.1.4 Identify one-half as one of two equal parts of a whole object
	<b>2. Computation</b>
	<b>Whole Numbers</b>
<b>D</b>	K.2.1 Recognize the number of objects up to 6, without counting (e.g., dots on number cubes, dominoes)
<b>B</b>	K.2.2 Add and subtract whole numbers up to 7, using concrete objects
	<b>Decimals</b>
	(No standards included under this heading.)
	<b>Fractions</b>
	(No standards included under this heading.)
	<b>Irrational Numbers</b>
	(No standards included under this heading.)
	<b>Exponents</b>
	(No standards included under this heading.)
	<b>Ratio, Proportion and Percent</b>
	(No standards included under this heading.)
	<b>3. Operations</b>
	<b>Properties</b>
	(No standards included under this heading.)

**Key :**

**‘B’ = Beginning level outcomes; ‘D’ = Developing level outcomes; ‘S’ = Secure (mastery) level outcomes**

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	<b>PATTERNS, FUNCIONS AND ALGEBRA</b>
	<b>1. Patterns</b>
	The student will:
<b>B</b>	K.1 Establish concepts of likeness and difference by sorting objects according to various attributes (e.g. size, shape, color, thickness) a. Describe common attributes of objects in a set b. Identify object which does not belong in a set
<b>B</b>	K.2 Recognize, copy, continue, and describe patterns (e.g., objects, pictures, sounds, movements)
<b>B</b>	K.3 Identify examples of discrete patterns (e.g., seasons, days of the week)
	<b>2. Functions</b>
	(No standards included under this heading.)
	<b>3. Algebra (Algebraic Thinking)</b>
	(No standards included under this heading.)
	<b>SPATIAL SENSE, GEOMETRY, AND MEASUREMENT</b>
	<b>1. Spatial Sense</b>
	The student will:
<b>B</b>	K.1 Name and demonstrate the relative position of objects; a. Place objects over, under, inside, beside, between, above, below, on top of, upside-down, behind, in back of, in front of.
<b>B</b>	b. Describe placement of objects with terms such as: on, inside, outside, above, below, over, under, beside, between, in front of, behind, next to, top, bottom
<b>D</b>	K.2 Identify symmetrical shape
	<b>2. Geometry</b>
<b>D</b>	K.1 Identify and draw common two-dimensional geometric shapes (circle, square, rectangle, triangle)
<b>B</b>	K.6.2 Identify common three-dimensional geometric shapes (sphere, cube, cylinder, cone)
<b>D</b>	K.6.3 Give examples of common 2D and 3D objects in the environment
	<b>3. Measurement</b>
<b>B</b> <b>B</b> <b>B</b> <b>D</b>	K.7.1 Compare and order objects by: a. Length (linear measure); long, short, tall, longer than, shorter than, taller than b. Weight (mass); heavy, light, heavier than, lighter than c. Volume (capacity); full, empty, holds more, holds less d. Temperature; hot, cold, hotter than, colder than e. Size; big, large, small, bigger than, larger than, smaller than

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<b>B</b>	K.7.2 Understand basic concepts of time and units to measure time a. Calendar: year, month, week, day b. Know the days of the week c. Be aware that clocks are an instrument to measure time
<b>B</b>	
<b>B</b>	
<b>B</b>	K.7.3 Identify tools of measure and their uses (e.g., clock, thermometer, scale, ruler, cup)
<b>B</b>	K.7.4 Recognize and know the value of penny and dime
<b>B</b>	K.7.5 Estimate measurements using non-standard units (e.g .paper clips, cubes, fingers)

**DATA ANALYSIS, STATISTICS AND PROBABILITY**

**1. Data**

<b>B</b>	The student will: K.1 Read and interpret a simple picture or bar graph Statistics
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**2. Probability**

	Students will apply concepts of randomness and uncertainty to make judgments, predictions, and decisions about probabilistic situations.
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**MATHEMATICAL REASONING**

Mathematical reasoning will be used by students in all of the four other areas (number sense, patterns, geometry, and data analysis. The depth of mathematical reasoning will increase as the skill level in the four other areas increases.

**1. Strategies**

<b>B</b>	The student will:  K.1 Solve problems using objects, words, pictures, numbers, actions or technology
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**2. Communication**

<b>B</b>	The student will:  K.1 Explain to others how problem was solved
<b>B</b>	K.2 See graphs in Data Section

<b>Everyday Math</b>	<b><u>GRADE 1</u></b>
	<b>NUMBER SENSE, COMPUTATION, AND OPERATIONS</b>
	<b>1. Number Sense</b>
	<b>Counting</b>
<b>EM</b> <b>D</b>	The student will: 1.1 Count forward to 120, backward from 30 1.2 Count by 2's, 5's, 10's

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<b>S</b>	a. Count by 2's to 30
<b>D</b>	b. Count by 5's to 120
	<b>Reading and Writing</b>
<b>S</b>	1.1.6 Read and write numerals, 0-120
	<b>Place Value</b>
<b>D</b>	1.1.7 Understand place value, ones, tens
	<b>Comparing and Ordering Numbers</b>
<b>S</b>	1.1.3 Identify and demonstrate odd and even quantities up to 12
<b>D</b>	1.1.4 Know ordinal positions through twentieth (20 <sup>th</sup> )
	1.1.9 Compare/order whole numbers and sets of objects to 100 using the symbols for less than, equal to, or greater than (<, =, >)
<b>D</b>	<b>Equivalence</b>
<b>B</b>	1.1.8 Recognize and generate equivalent forms for the same number using physical models, words and number expressions up to 20; e.g., concept of ten is described by "10 rod," full tens frame, numeral 10, 5 + 5, 15-5, one less than 11, my brother's age
	<b>Rounding</b>
	(No standards included under this heading.)
	<b>Meaning of Fractions</b>
<b>B</b>	1.1.5 Identify one half of a set of concrete objects; identify thirds and fourths as equal parts of a whole object
	<b>2. Computation</b>
	<b>Whole Numbers</b>
<b>S</b>	<b>1.3.1</b> Know addition and subtraction facts up to 10
<b>S</b>	1.3.2 Solve one-digit addition and subtraction problems written horizontally and vertically
<b>D</b>	1.3.3 Solve two-digit addition and subtraction problems without regrouping
<b>D</b>	1.3.4. Find the sum of three one-digit numbers
	<b>Decimals</b>
	(No standards included under this heading.)
	<b>Fractions</b>
	(No standards included under this heading.)
	<b>Irrational Numbers</b>
	(No standards included under this heading.)
	<b>Exponents</b>
	(No standards included under this heading.)
	<b>Ratio, Proportion and Percent</b>
	(No standards included under this heading.)
	<b>3. Operations</b>
	<b>Properties</b>
<b>B</b>	1.3.5 Know that when you add 3 numbers, you get the same sum regardless of grouping addends; ( <i>associative property</i> ) $(1+2)+3 = 1+(2+3)$
<b>B</b>	1.3.6 Understand that you can add numbers in any order ( <i>commutative property</i> ) $(1+2=2+1)$

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<b>S</b>	1.3.7 Know what happens when you add zero to a number ( <i>identity property of addition</i> ) (1+0=1)
<b>D</b>	1.3.4 Know and use the opposite relationship (Fact Families to 12) between addition and subtraction ( <i>inverse relationship</i> ) (1+2=3, 3-1=2)
<b>PATTERNS, FUNCTIONS AND ALGEBRA</b>	
<b>1. Patterns</b>	
	The student will:
<b>B</b> <b>B</b>	1.1 Sort, classify, and compare a set objects in more than one way a. Identify the common attribute of the objects of a set b. Select matching additions to the set
<b>B</b> <b>B</b>	1.2 Recognize, describe, and extend patterns. a. Analyze and describe patterns with multiple attributes using numbers and shapes b. Extend simple repeating and growing patterns (increasing, decreasing) with materials, pictures and geometric items
<b>2. Functions</b>	
(No standards included under this heading.)	
<b>3. Algebra (Algebraic Thinking)</b>	
<b>D</b>	1.5.2 Write and solve number sentences from problem situations using the symbols +, -, =, > or <
<b>B</b>	1.5.3 Solve simple addition and subtraction equations with missing quantities ( _ - 2=4; 5 + _ = 7)
<b>D</b>	1.5.4 Determine the truth value of an equation (7=1+6, T or F; 5+1=7, T or F)
<b>SPATIAL SENSE, GEOMETRY, AND MEASUREMENT</b>	
<b>1. Spatial Sense</b>	
	The student will:
<b>B</b>	1.1 Give directions using positional words (near, far, close to, left, right)
<b>B</b>	1.2 Create symmetrical patterns
<b>2. Geometry</b>	
<b>B</b>	1.7.1 Identify, describe, and compare attributes of 2D shapes (triangle, square, rectangle, rhombus, circle, octagon, hexagon, trapezoid) by the number of sides, corners or angles (vertices)

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<b>B</b>	1.7.2 Identify and describe common three dimensional (solid) geometric shapes (sphere, cube, cylinder, cone, pyramid, triangular and rectangular prism)
<b>B</b>	1.7.3 Identify and describe objects in environment that depict 2D and 3D geometric figures
	<b>3. Measurement</b>
<b>B</b> <b>D</b> <b>D</b>	1.8.1 Measure lengths (linear measure): a. Measure using non-standard units, inches, feet and centimeters b. Measure and draw line segments in inches and centimeters
<b>B</b>	1.8.2 Measure weight (mass): a. Compare weights of objects using a balance scale.
<b>B</b> <b>B</b>	1.8.3 Measure volume (capacity): a. Estimate and measure capacity in cups b. Identify pint, quart, gallon, liter
<b>B</b> <b>B</b> <b>B</b> <b>S</b> <b>B</b> <b>S</b>	1.8.5 Understand concepts of time: a. Sequence events (before/after, first/next/last, seasons, morning/afternoon/night) b. Compare duration of events (more or less time) c. Know the days of the week/months of the year, both in and out of order d. Tell time to hour and half-hour on analog/digital clocks e. Orientation in time; yesterday, today, tomorrow, morning, afternoon, evening f. Using a calendar, identify the date, day of the week, month, and year
<b>B</b>	1.8.7 Select appropriate measurement tools for length, weight, volume, temperature for a given situation
<b>S</b> <b>D</b> <b>S</b> <b>D</b>	1.8.6 Work with measures of money: a. Identify and recognize relative value of penny, nickel, dime, quarter, and dollar b. Recognize and use signs for dollar (\$) and cents ( ) c. Show how different combinations of coins have the same value d. Count and report the value of a set of pennies, nickels, or dimes, whose total value is up to 100 cents (\$1.00)
<b>D</b>  <b>D</b> <b>?B</b>	1.8.7 Describe, estimate, and measure using standard and non-standard units: a. Compare the length, weight, and volume of two or more objects by using direct comparison or a non-standard unit b. Solve problems involving standard and non-standard measurement c. Identify dozen, half-dozen, pair
	<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b>
	<b>1. Data</b>
	The student will:

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<b>S</b> <b>S</b>	1.1 Use data collection tools {e.g. tally charts and frequency tables) to: a. identify, describe, and read data b. collect and record data from various sources or situations, including surveys and simple experiments
<b>D</b> <b>D</b>	1.2 Use picture graphs (pictographs), bar graphs (horizontal, real-object graphs, to: a. identify, describe, and read data b. compare data and answer questions (e.g. largest/smallest, most often/least often, true/untrue)
	<b>2. Statistics</b>
	(No standards included under this heading.)
	<b>3. Probability</b>
<b>B</b>	Students will apply concepts of randomness and uncertainty to make judgments, predictions, and decisions about probabilistic situations.  1.10.1 Describe the likelihood of simple events as more likely/equally likely/less likely/unlikely (e.g. using spinners, number cubes)
<b>B</b>	1.10.2 Conduct probability experiments (e.g. using spinners, tiles, or number cubes, marbles out of a bag with replacement) and record the outcomes
	<b>MATHEMATICAL REASONING</b> Mathematical reasoning will be used by students in all of the four other areas (number sense, patterns, geometry, and data analysis. The depth of mathematical reasoning will increase as the skill level in the four other areas increases. <b>1. Strategies</b>
<b>D</b>	The student will:  <b>1.1</b> Create and solve word problems
<b>D</b> <b>D</b> <b>D</b>	1.2 Develop and use problem solving strategies: a. Choose the operation/approach b. Describe orally and model a problem situation using words, objects, technology, actions, pictures, or number phrase and sentence c. Guess (estimate) and check that answers are reasonable d. Explain to others how problem was solved
	<b>2. Communication</b>
<b>D</b>	The student will: 1.1 Explain to others how problem was solved
<b>D</b>	1.2 See graphs in Data Section
<b>Everyday Math</b>	<b><u>GRADE 2</u></b>  <b>NUMBER SENSE, COMPUTATION, AND OPERATIONS</b> <b>1. Number Sense</b>

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	<p><b>Counting</b></p> <p>The student will:</p>
<b>D</b>	2.1 Count forward to 1,100, starting at any given number
<b>D</b>	2.2 Count by 5's, 10's, 25's, 50's, 100's to 1,000 a. Count forward/backward by 10's from any given number less than 1,000
	<p><b>Reading and Writing</b></p>
<b>D</b>	2.3 Read and write numerals, 0 to 1,100
<b>D</b>	2.4 Read words for numerals up to one hundred
	<p><b>Place Value</b></p>
<b>S</b>	2.1.4 Understand and demonstrate place value; ones, tens, hundreds (e.g., 10 = 10 ones or 1 ten)
	<p><b>Comparing and Ordering Numbers</b></p>
<b>D</b>	2.1.3 Demonstrate understanding of the relationships between odd and even numbers in addition and subtraction (e.g., odd + odd = even, odd + even = odd)
<b>D</b>	2.1.4 Compare/order whole numbers to 1,100 using symbols for less than, equal to, or greater than (<,,>)
<b>S</b>	2.1.5 Plot numbers on a number line in a given sequence between 0 and 100
	<p><b>Equivalence</b></p>
<b>D</b>	2.1.6 Represent whole numbers up to 999 in various ways, maintaining equality (expanded form, e.g., 64= 60+4, 367=300+60+7)
<b>D</b>	2.1.12 Recognize and generate equivalent forms for the same number using physical models, words and number expressions up to 100; e.g., concept of ten is described by "10 rod," full tens frame, numeral 10, 5 + 5, 15-5, one less than 11, my brother's age
	<p><b>Rounding</b></p> <p>(No standards included under this heading.)</p>
	<p><b>Meaning of Fractions</b></p>
<b>D</b>	2.1.7 Recognize and name unit fractions: $\frac{1}{2}$ , $\frac{1}{3}$ , $\frac{1}{4}$ .
<b>D</b>	2.1.8 Know that when all fractional parts are included, such as four-fourths, the result is equal to one whole
	<p><b>2. Computation</b></p>
	<p><b>Whole Numbers</b></p>

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<b>S</b>	<b>2.2.1</b> Know/recall addition and subtraction facts to 20
<b>D</b>	2.2.2 Use repeated addition (e.g., $2+2+2 = 6$ ) and doubled numbers
<b>D</b>	2.2.2 Solve two-digit addition and subtraction problems with and without regrouping  horizontally and vertically
<b>S</b>	2.2.3 Solve three-digit addition and subtraction problems without regrouping, horizontally and vertically
<b>D</b>	2.2.5 Add three two-digit numbers
<b>B</b>	2.2.6 Separate a group of objects (up to 30) into equal subsets
	<b>Decimals</b> (No standards included under this heading.)
	<b>Fractions</b> (No standards included under this heading.)
	<b>Irrational Numbers</b> (No standards included under this heading.)
	<b>Exponents</b> (No standards included under this heading.)
	<b>Ratio, Proportion and Percent</b> (No standards included under this heading.)
	<b>3. Operations</b>
<b>S</b>	<b>Properties</b> (No standards included under this heading.) 2.3.1 Know and use the opposite relationship between addition and subtraction (inverse relationship) ( $1+2 = 3$ , $3-1=2$ ) to check sums and differences
	<b>PATTERNS, FUNCTIONS AND ALGEBRA</b> <b>1. Patterns</b>
	The student will:
<b>S</b> <b>D</b>	2.1 Sort, classify, and compare 2D and 3D objects according to number and shape of faces, number of edges and vertices
<b>S</b> <b>D</b>	2.2 Recognize, create and extend a wide variety of patterns, using numbers, concrete objects and pictures a. Repeating (continuous) patterns b. Growing patterns Number sequences (e.g., doubles in learning addition; given 3 numbers, find the next number in the sequence)
<b>S</b>	2.3 Make generalizations and predictions using patterns (e.g., determine a missing element)
<b>D</b>	<b>2. Functions</b>
<b>S</b>	<b>3. Algebra (Algebraic Thinking)</b> <b>2.5.1</b> Solve simple addition and subtraction equations with missing quantities to prove equality ( $3+4 = \_ + 5$ )
<b>D</b>	<b>2.5.2</b> Solve number sentences with inequalities where a number is missing

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	(5 + _ > 8)
	<b>SPATIAL SENSE, GEOMETRY, AND MEASUREMENT</b> <b>1. Spatial Sense</b>
	The student will:
<b>D</b>	2.1 Identify a line of symmetry in squares, circles, and rectangles
<b>D</b>	2.2 Identify and determine whether squares and rectangles are congruent (same shape and size) or similar (same shape different size) by copying or superposition (lay one shape on top of another)

	<b>2. Geometry</b>
<b>D</b>	2.7.1 Identify, describe, and compare attributes of 2D (plane) shapes (extending to include ellipse, pentagon)
<b>D</b>	2.7.2 Identify, describe, and compare attributes of common three-dimensional (solid) geometric shapes (sphere, cube, cylinder, cone, pyramids, triangular and ???rectangular solid) according to the number and shape of the solid's faces, edges, and corners.
<b>D</b>	2.7.3 Identify lines as horizontal, vertical
	<b>3. Measurement</b>
<b>D</b> <b>S</b> <b>D</b> <b>D</b>	2.8.1 Measure lengths (linear measure): a. Measure and draw line segments in feet, inches to _ inch and 1 centimeter. b. Measures length to the nearest inch, foot, centimeter record and label results c. Know that 1 foot = 12 inches d. Know abbreviations: foot (ft.), inch (in.), centimeter (cm.) e. Estimate linear measurements, then measure to check answer
<b>D</b> <b>B</b>	2.8.2 Measure weight (mass): a. Know abbreviations: pound (lb.), kilogram (kg.) b. Estimate and measure weight to the nearest pound/kilogram; record and label results
<b>D</b> <b>D</b> <b>D</b>	2.8.3 Measure volume (capacity): a. Estimate and measure liquid volume to the nearest cup/pint/quart/gallon/liter record and label results b. Compare volumes using concepts of more, less, equivalent c. Know abbreviations: quart (qt.), liter (l.), cup (c), pint (pt.), gallon (gal.)
<b>D</b> <b>D</b>	2.8.4 Measure temperature: a. Measure and record temperatures in Fahrenheit; record and label results

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	b. Know the symbol for degree ( $^{\circ}$ )
<b>S</b> <b>D</b> <b>S</b> <b>D</b> <b>D</b>	2.8.5 Understand concepts of time: a. Tell time to the quarter hour and five-minute intervals using analog and digital clocks b. Know relationships of time (e.g., minutes in an hour, days in a month, weeks in a year) c. Know how to distinguish time as A.M. or P.M. d. Determine the elapsed time in hours (e.g., 11:00a.m. to 4:00 p.m.) e. Write the date using words and numbers, and only numbers
<b>S</b> <b>S</b> <b>S</b>	2.8.6 Work with measures of money a. Read and write amounts of money using signs for dollar (\$), cents ( $\text{\cent}$ ), and the decimal point b. Show how different combinations of coins and dollars have the same value. c. Count and compare a collection of pennies, nickels, dimes and quarters whose total value is \$2.00 or less
	<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b>
	<b>1. Data</b>
<b>D</b> <b>D</b> <b>D</b> <b>D</b>	The student will:  2.1 Use data collection tools {e.g. tally charts and frequency tables) to: a. identify, describe, read and interpret data b. collect and record data in more than one way c. make comparisons and predictions, draw conclusions and answer questions d. generate additional questions and explanations of data
	<b>2. Statistics</b> (No standards included under this heading.)
	<b>3. Probability</b> Students will apply concepts of randomness and uncertainty to make judgments, predictions, and decisions about probabilistic situations.
<b>B</b>	2.10.1 Describe the likelihood of simple events as certain/possible/impossible (e.g., using spinners, number cubes)
<b>B</b>	2.10.2 Predict and list all possible outcomes of probability experiments (independent event) using spinners, number cube and coins
	<b>MATHEMATICAL REASONING</b> Mathematical reasoning will be used by students in all of the four other areas (number sense, patterns, geometry, and data analysis. The depth of mathematical reasoning will increase as the skill level in the four other areas increases.
	<b>1. Strategies</b>

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<b>S – SOLVE D – CREATE</b>	The student will:  2.1 Create and solve word problems
<b>D D D D</b>	2.2 Develop and use problem solving strategies: Restate the question or problem in own words and identify the information needed to solve the problem a. Choose the operation/approach b. Model a problem situation using words, objects, pictures, numbers, or technology c. Guess (estimate) and check that answers are reasonable e. Check for correct answer using an appropriate strategy
<b>S</b>	<b>Communications</b> The student will:  2.1 Explain to others how problem was solved and justify reasoning

<b>Everyday Math</b>	<b><u>GRADE 3</u></b>  <b>NUMBER SENSE, COMPUTATION, AND OPERATIONS</b>  <b>1. Number Sense</b>
	<b>Counting</b> (No standards listed under this heading.)
	<b>Comparing and Ordering Numbers</b>
<b>D</b>	The student will: 3.1 Compare and order whole numbers to 10,000 using the symbols for less than, equal to, or greater than (<, =, >)
<b>B</b>	3.2 Understand that zero is neither negative nor positive
	<b>Equivalence</b>
<b>D</b>	3.1 Represent whole numbers up to 9,999 in various ways maintaining equivalencies. (e.g., $3,206 = (32 \times 100) + 6$ )
	<b>Rounding</b> (No standards included under this heading.)
	<b>Meaning of Fractions</b> The student will:
<b>D</b>	3.1 Compare fractions, using drawings or concrete materials, to show equivalency (denominators of 2,3,4,6,8,10) in context (e.g., 1/2 of a pizza is the same amount as 2/4 of another pizza that is the same size; show that 3/8 is larger than 1/4)
	<b>2. Computation</b>
	<b>Whole Numbers</b> The student will:
<b>D</b>	3.1 Find the difference of two whole numbers between 0 and 10,000. (e.g., $9,354 - 27 = \quad$ ) resulting in a whole number
	3.2 Determine the unit cost when given the total cost and number of units

**Key :**

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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

<b>D</b>	3.3 Find the sum of between two and five whole numbers of varying lengths with a sum no greater than 10,000
<b>D</b>	3.4 Solve up to 4 digit addition and subtraction problems with regrouping, horizontally and vertically (e.g., $534 + 3867 + 89 + 8 + \underline{\quad}$ )
	<b>Decimals</b> (No standards included under this heading.)
	<b>Fractions</b> (No standards included under this heading.)
	<b>Irrational Numbers</b> (No standards included under this heading.)
	<b>Exponents</b> (No standards included under this heading.)
	<u>Ratio, Proportion and Percent</u> (No standards included under this heading.)
	<u>3. Operations</u>
	<b>Properties</b> The student will:
<b>B</b>	3.1 Understand the special properties of 0 and 1 in multiplication and division

<b>Everyday Math</b>	<b>PATTERNS, FUNCTIONS AND ALGEBRAIC THINKING</b>
	<b>Patterns</b>
<b>D</b>	3.1 Represent and analyze patterns using words, tables and graphs.
<b>S</b>	3.2. Extend and recognize a linear pattern by its rules (e.g., the number of legs on a given number of horses may be calculated by counting by 4s or by multiplying the number of horses by 4).
	<b>Functions</b> The student will:
	3.1. Solve simple problems involving a functional relationship between two quantities (e.g., find the total cost of multiple items given the cost per unit).
	<b>Algebraic Thinking</b> The student will:
<b>S</b>	3.1 Use letters, boxes or other symbols to represent an unknown number in simple expressions or equations.
<b>D</b>	3.2 Write and solve number sentences from problem situations using the symbols for multiplication, division, equality, greater than or less than.
	3.3 Solve a simple multiplication and division equation with missing quantities to prove equality.
	3.4 Select appropriate operational and relational symbols to make an expression true (e.g., if $4 \underline{\quad} 3 = 12$ , what operational symbol goes in the blank?).
<b>D</b>	3.5 Use properties to solve simple number problems (e.g., if $5 \times 7 = 35$ , then what is $7 \times 5$ ? and if $5 \times 7 \times 3 = 105$ , then what is $7 \times 3 \times 5$ ?)
	<b>SPATIAL SENSE, GEOMETRY, AND MEASUREMENT</b>
	<b>1. Spatial Sense</b> The student will:

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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

<b>S</b>	3.1 Identify lines of symmetry in regular geometric shapes
	3.2 Recognize or predict one transformation on 2D figures (flip, slide, or turn)
	<b>2. Geometry</b> The student will:
<b>S</b>	3.1 Identify, describe, and classify polygons (including rhombus, trapazoid, pentagons, hexagons, and octagons).
<b>B</b>	3.2 Identify attributes of triangles (two equal sides for the isosceles triangle, three equal sides for the equilateral triangle, right angle for the right triangle).
<b>B</b>	3.3 Identify attributes of quadrilaterals ( parallel sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square).
<b>B</b>	3.4 Identify right angles in geometric figures or in appropriate objects and determine whether other angles are greater or less than a right angle.
<b>D</b>	3.5 Identify common solid objects that are the components needed to make a more complex solid object.
	<b>3. Measurement</b> The student will:
<b>B</b>	3.1 Choose the appropriate tools and standard units to estimate and measure the length, liquid volume, and weight/mass of given objects.
<b>D</b>	3.2 Find the perimeter of a polygon with whole number sides.
<b>D</b>	3.3 Carry out simple unit conversions within a system of measurement (e.g., centimeters and meters, hours and minutes).
<b>D</b>	3.4 Tell time to the minute using analog time. (before and after the hour)
<b>D</b>	3.5 Determine elapsed time in 15 and 30 minute intervals
<b>S</b>	3.6 Make change using as few coins as possible up to a dollar

<b>Everyday Math</b>	<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b> General Statement: Students will analyze, interpret, and display data in order to communicate information and make predictions and decisions.
	<b>Data</b> The student will:
<b>S</b>	3.1 Read and interpret data from circle/pie graphs (using halves, thirds and quarters) and line plots
<b>D</b>	3.2 Collect data (e.g., using observations, measurements, surveys, or experiments) and construct tables, charts, and graphs (e.g., bar graphs, line plots, pictographs) with appropriate title and key
	<b>Statistics</b> (No standards included under this heading.)
	<b>Probability</b> Students will apply concepts of randomness and uncertainty to make judgments, predictions, and decisions about probabilistic situations.
	The student will:
	3.1 Summarize and display the results of probability experiments (e.g., tally chart, frequency table, graph)
<b>D</b>	3.2 Analyze the outcomes for a simple probability experiment conducted multiple times (e.g., tossing a coin 10 times compared to tossing a coin 100 times)
<b>B</b>	3.3 Predict future events using probability experiments (e.g., use a line plot to predict the temperature forecast for the next day)
	<b>MATHEMATICAL REASONING</b> Students use strategies, skills, and concepts in finding solutions.
	The student will:
<b>S</b>	3.1 Solve problems by identifying relationships, distinguishing relevant from irrelevant information, sequencing and prioritizing information, and observing patterns

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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

S	3.2 Solve multi-step problems by breaking a problem into simpler parts.
S	3.3 Use estimation to verify the reasonableness of calculated results.
S	3.4 Evaluate the reasonableness of the solution in the context of the original situation.
S	3.5 Apply strategies and results from simpler problems to more complex problems.
S	3.6 Support the correct solution by using clear and logical mathematical processes.

Everyday Math	<b><u>GRADE 4</u></b>
	<b>NUMBER SENSE, COMPUTATION, AND OPERATIONS</b>
	<b>1. Number Sense</b>
	<b>Counting</b> (No standards listed under this heading.)
	<b>Reading and Writing</b> The student will:
S	4.1 Read and write numerals to 100,000
D	4.2 Write numerals with words up to 10,000
	<b>Place Value</b> The student will:
S	4.1 Manipulate and align numbers to show understanding of place value for each digit in numbers to 100,000
	<b>Comparing and Ordering Numbers</b> The student will:
S	4.1 Compare and order whole numbers to 100,000 using the symbols for less than, equal to, or greater than (<, =, >)
S	4.2 Understand the concept of a negative integer (e.g., is less than zero, temperature, owing money)
	<b>Equivalence</b> The student will:
S	4.1 Identify and represent factors and multiples of whole numbers through 100, and classify numbers as prime or composite. (e.g., $12 = 4 \times 3 = 2 \times 6 = 2 \times 2 \times 3$ )
	<b>Rounding</b> The student will:
S	4.1 Round numbers, up to 10,000, to the nearest ten, hundred, thousand
	<b>Meaning of Fractions</b> The student will:
S	4.1 Explain and represent different interpretations of fractions, for example, parts of a whole, parts of a set, and division of whole numbers by whole numbers
	<b><u>2. Computation</u></b>
	<b>Whole Numbers</b> The student will:
S	4.1 Demonstrate mastery (accuracy and speed) of the multiplication tables for numbers between 1 and 12
S	4.2 Solve simple problems involving multiplication of multi-digit numbers by one-digit numbers (e.g., $3,671 \times 3 = \quad$ )
S	4.3 Solve division problems in which a two-digit number is evenly divided by a one-digit number (e.g., $65 \div 5 = \quad$ )
D	4.4 Use the inverse relationship of multiplication and division to compute and check results

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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

	4.5 Demonstrate...
	4.6 Solve...
	<b>Decimals</b> (No standards included under this heading.)
	<b>Fractions</b> (No standards included under this heading.)
	<b>Irrational Numbers</b> (No standards included under this heading.)

<b>Everyday Math</b>	
	<b>Exponents</b> (No standards included under this heading.)
	<i>Ratio, Proportion and Percent</i> (No standards included under this heading.)
	<u>3. Operations</u>
	<b>Properties</b> The student will:
<b>B</b>	4.1 Demonstrate understanding of the distributive property of multiplication (e.g., $21 \times 4 = (20 + 1) \times 4 = (20 \times 4) + (1 \times 4)$ )
	<b>PATTERNS, FUNCTIONS AND ALGEBRAIC THINKING</b>
	<b>1. Patterns</b> The student will:
<b>S</b>	4.1 Represent simple patterns and functional relationships with mathematical language (e.g., In this pattern you are always adding 4 to the previous number)
	<b>2. Functions</b>
	<b>3. Algebraic Thinking</b> The student will:
<b>D</b>	4.1 Use parentheses to indicate which operation to perform first
<b>D</b>	4.2 Students know how to manipulate equations. The student will: 2.1 Know and understand that adding equal amounts to both sides of an equation maintains equality. 2.2 Know and understand that multiplying both sides of an equation by the same number maintains equality.
<b>D</b>	4.3 Know that adding a negative number is the same as subtracting a positive and Expressions
	<b>SPATIAL SENSE, GEOMETRY, AND MEASUREMENT</b>
	<b>1. Spatial Sense</b>
<b>D</b>	4.1 Identify congruent and similar figures in regular geometric shapes
	<b>2. Geometry</b> The student will:
<b>D</b>	4.1 Identify lines that are parallel and perpendicular
<b>D</b>	4.2 Identify the radius and diameter of a circle
<b>S</b>	4.3 Know the definitions of a right angle, an acute angle, an obtuse angle
<b>D</b>	4.4 Compare, and model two- and three dimensional objects using their attributes (e.g., identify similarities and differences of quadrilaterals)

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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

	3. <u>Measurement</u> The student will:
D	<u>4.1 Find the area and perimeter of rectangular shapes by using appropriate standard units (e.g., cm<sup>2</sup> and cm)</u>
D	<u>4.2 Know that rectangles with the same area can have different perimeters</u>
D	<u>4.3 Know that rectangles with the same perimeter can have different areas</u>
S	<u>4.4 Make change using as few coins and bills as possible up to \$100.</u>
D	<u>4.5 Understand and use formulas to solve problems involving perimeter and areas of rectangles and squares.</u>
D	<u>4.6 Determine elapse time to the minute.</u>

Everyday Math	<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b> General Statement: Students will analyze, interpret, and display data in order to communicate information and make predictions and decisions.
	<b>1. Data Analysis</b> The student will:
D	4.1 Classify data as numerical or categorical.
D	4.2 Formulate numerical and categorical questions, collect, organize and represent data with tables, charts, and graphs
	<b>2. Statistics</b> (No standards included under this heading.)
	<b>3. Probability</b> <u>Students will apply concepts of randomness and uncertainty to make judgments, predictions, and decisions about probabilistic situations.</u>
	The student will:
D	4.1 Express outcomes of experimental probability situations verbally and numerically (e.g., 3 out of 4; )
D	4.2 Using physical models and pictures to represent possible arrangements of two or three objects
	<b>MATHEMATICAL REASONING</b> Students use strategies, skills, and concepts in finding solutions.
D	4.1 Solve problems by identifying relationships, distinguishing relevant from irrelevant information, sequencing and prioritizing information, and observing patterns
D	4.2 Solve multi-step problems by breaking a problem into simpler parts.
D	4.3. Use estimation to verify the reasonableness of calculated results.
D	4.4. Evaluate the reasonableness of the solution in the context of the original situation.
D	4.5. Apply strategies and results from simpler problems to more complex problems.
D	4.6. Support the correct solution by using clear and logical mathematical processes.

Everyday Math	<b><u>GRADE 5</u></b>
	<b>NUMBER SENSE, COMPUTATION, AND OPERATIONS</b>
	<b>1. Number Sense</b>
	<b>Counting</b> The student will:

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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

S	5.1 Manipulate and align numbers to show understanding of place value for each digit in numbers to 1,000,000
	<b>Comparing and Ordering Numbers</b> The student will:
S	5.1 Compare and order whole numbers to 1,000,000 using the symbols for less than, equal to, or greater than (<, =, >)
S	5.2 Use concepts of negative integers (e.g., on a number line, in counting, in temperature, in owing money)
	<b>Equivalence</b> The student will:
D	5.1 Interpret percents as a part of a hundred; find decimal and percent equivalents for fractions and explain why they represent the same value
D	5.2 Understand and compute positive integer powers of nonnegative integers; compute examples as repeated multiplication. (e.g. $3^3 = 3 \times 3 \times 3 = 27$ )
D	5.3 Determine the prime factors of all numbers through 50 and write the numbers as the product of their prime factors by using exponents to show multiples of a factor (e.g., $24 = 2 \times 2 \times 2 \times 3 = 2^3 \times 3$ )
D	5.4 Understand different ways to express remainders in division. (e.g. remainder ®, repeating or terminating decimal, fraction).
	<b>Rounding</b> (No standards included under this heading.)
	<b>Meaning of Fractions</b> The student will:
S	5.1 Understand that fractions, decimals, and percent are three different representations of the same concept ( $1/2 = 0.5 = 50\%$ )
S	5.2 Relate a fraction to a simple decimal on a number line and write tenths and hundredths in decimal and fraction notations and know the fraction and decimal equivalents for halves and fourths (e.g., $1/2 = 0.5$ or $.50$ ; $7/4 = 1 \ 3/4 = 1.75$ )
	<b>2. Computation</b>
	<b>Whole Numbers</b> The student will:
D	5.1 Solve problems involving multiplication of multi-digit numbers by two-digit numbers.
D	5.2 Solve problems involving division of multi-division by two-digit divisors, with quotients involving remainders.
	<b>Decimals</b> The student will:
S	5.1 Add and subtract numbers with up to two decimal places.
D	5.2 Determine the total cost when given the unit cost and the number of units less than 100.
D	5.3 Determine the unit cost when given the total cost and number of units less than 100.
	<b>Fractions</b> The student will:
D	5.1 Solve simple problems, arising from concrete situations, involving the addition and subtraction of fractions and mixed numbers (like and unlike denominators of 20 or less), and express answers in the simplest form.

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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

<b>Everyday Math</b>	
	<b>Irrational Numbers</b> (No standards included under this heading.)
	<b>Exponents</b> (No standards included under this heading.)
	<b>3. Operations</b>
	<b>Properties</b> (No standards included under this heading.)
	<b>PATTERNS, FUNCTIONS AND ALGEBRAIC THINKING</b>
	<b>1. Patterns</b> The student will:
<b>S</b>	5.1 Analyze the structure of numerical and geometric patterns and express the relationship using words, tables, graphs, or a mathematical sentence.
	<b>2. Functions</b> The student will:
<b>D</b>	5.1 Write ordered pairs correctly and graph ordered pairs on a four-quadrant grid.
<b>D</b>	5.2 Describe how the quantitative change in a variable affects the value of a related variable; e.g. describe how the rate of growth varies over time, based upon data in a table or graph.
	<b>3. Algebraic Thinking</b> The student will:
<b>D</b>	5.1 Construct a table of values to solve problems associated with mathematical relationship and state the mathematical relationship.
	<b>SPATIAL SENSE, GEOMETRY, AND MEASUREMENT</b>
	<b>1. Spatial Sense</b> The student will:
<b>D</b>	5.1 Translate between 2-dimensional and 3-dimensional representations.
	<b>2. Geometry</b> The student will:
<b>D</b>	5.1 Measure, identify, and construct angles, perpendicular and parallel lines, rectangles, and triangles by using appropriate tools (e.g., straightedge, ruler, compass, protractor, drawing software).
<b>D</b>	5.2 Know that the sum of the angles of any triangle is $180^\circ$ and the sum of the angles of any quadrilateral is $360^\circ$ and use this information to solve problems.
	<b>3. Measurement</b> The student will:
<b>S</b>	5.1 Find the area and perimeter of a triangle using the formula.
<b>B</b>	5.2 Construct a cube and rectangular box from two-dimensional patterns and use these patterns to compute the surface area for these objects.
<b>D</b>	5.3 Understand the concept of volume and use the appropriate units in common measuring systems (i.e., cubic centimeter [ $\text{cm}^3$ ], cubic meter [ $\text{m}^3$ ], cubic inch [ $\text{in}^3$ ], cubic yard [ $\text{yd}^3$ ]) to compute the volume of rectangular solids.
<b>D</b>	5.4 Differentiate between, and use appropriate units of measures for, two-and three-dimensional objects (i.e., find the perimeter, area, volume).

<b>Everyday Math</b>	<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b>
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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

	Students will analyze, interpret, and display data in order to communicate information and make predictions and decisions.
	<b>1. Data</b> The student will:
<b>D</b>	5.1 Display, analyze, compare, and interpret data sets, including data sets of different sizes.
<b>D</b>	5.2 Explain which types of graphs are appropriate for various data sets (e.g., circle graphs, bar graphs)
<b>D</b>	5.3 Use fractions and percentages to compare data sets
	<b>2. Statistics</b> The student will:
<b>S</b>	5.1 Calculate the mean and range
<b>S</b>	5.2 Find the median and possible outlier (s)
	<b>3. Probability</b> Students will apply concepts of randomness and uncertainty to make judgments, predictions, and decisions about probabilistic situations.  The student will:
<b>D</b>	5.1 Represent all possible outcomes for a simple probability situation in an organized way (e.g., tables, grids, tree diagrams) and draw conclusions from the results.
	<b>MATHEMATICAL REASONING</b> Students use strategies, skills, and concepts in finding solutions.  The student will:
<b>D</b>	5.1 Solve problems by identifying relationships, distinguishing relevant from irrelevant information, sequencing and prioritizing information, and observing patterns
<b>D</b>	5.2 Solve multi-step problems by breaking a problem into simpler parts.
<b>D</b>	5.3 Use estimation to verify the reasonableness of calculated results.
<b>D</b>	5.4 Evaluate the reasonableness of the solution in the context of the original situation.
<b>D</b>	5.5 Apply strategies and results from simpler problems to more complex problems.
<b>D</b>	5.6 Support the correct solution by using clear and logical mathematical processes.
<b>D</b>	5.7 Use a variety of estimation strategies (rounding, front-end estimation, over and under estimation), decide when an estimated solution is called for and explain why such a solution may be appropriate.
<b>D</b>	5.8 Estimate the sum or difference of whole numbers and positive decimals to two places.

<b>Everyday Math</b>	<b><u>GRADE 6</u></b>	
	<b>NUMBER SENSE, COMPUTATION, AND OPERATIONS</b>	
	<b>1. Number Sense</b>	
	<b>Reading and Writing</b> The student will:	
	<b>S</b>	6.1 Read and write numerals up to trillions.
	<b>S</b>	6.2 Read and write numerals with words up to three decimal places.
	<b>S</b>	6.3 Read and write numerals to three places.
	<b>B</b>	6.4 Read and write Roman numerals up to 1,000.
		<b>Comparing and Ordering Numbers</b>

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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

	The student will:
<b>S</b>	6.1 Compare fractions, decimals, and mixed numbers with $>$ , $<$ , $=$ .
	<b>Rounding</b> The student will:
<b>S</b>	6.1 Round to the nearest ten; hundred; thousand; hundred thousand; million.
<b>S</b>	6.2 Round decimals to the nearest tenths; hundredths; thousandths.
<b>S</b>	6.3 Round fractions to the nearest whole number.
	<b>2. Computation</b>
	<b>Whole Numbers</b> The student will:
<b>S</b>	6.1 Determine prime factorization of a number.
<b>S</b>	6.2 Determine the least common multiple and the greatest divisor/factor of whole numbers.
<b>S</b>	6.3 Multiply multi-digit factors without a calculator.
<b>S</b>	6.4 Divide dividends of up to five digits by multi-digit divisors without a calculator.
	<b>Decimals</b> The student will:
<b>B</b>	6.1 Multiply and divide decimals.
<b>D</b>	6.2 Multiply and divide decimals by powers of ten.
	<b>Fractions</b> The student will:
<b>S</b>	6.1 Add and subtract fractions and mixed numbers.
	<b>Exponents</b> The student will:
<b>D</b>	6.1 Evaluate numerical expressions involving powers.
<b>D</b>	6.2 Write the prime factorization of a positive integer using exponents.
	<b>Ratio, Proportion and Percent</b> The student will:
<b>D</b>	6.1 Find the given percent of a number.
<b>D</b>	6.2 Find what percent of a given number is of another number.
<b>D</b>	6.3 Find an unknown number when a percent of a number is known.
	6.4 Use expressions with percents greater than 100% and less than 1%.
<b>D</b>	6.5 Solve proportions, including word problems involving proportions with one unknown.
	<b>PATTERNS, ALGEBRA AND FUNCTIONS</b>
	<b>1. Functions</b> The student will:
<b>D</b>	6.1 Solve problems involving linear functions with integer values; write the equation; and graph the resulting ordered pairs of integers on a grid.

Everyday Math	<b>2. Algebraic Thinking</b>
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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

	The student will:
<b>D</b>	6.1 Apply the commutative, associative, and distributive properties to evaluate expressions; and justify each step in the process.
<b>D</b>	6.2 Recognize and generate equivalent forms for simple algebraic expressions (e.g., $4m=m+m+m+m$ or $aX+5=5a+4$ ).
<b>D</b>	6.3 Apply algebraic order of operations.
<b>D</b>	6.4 Apply inverse operations to evaluate expressions (e.g., sum of a number and its opposite is zero and the product of a number and its reciprocal is one).
<b>S</b>	6.5 Solve problems with more than one operation, according to order of operations.
<b>S</b>	6.6 Understand the concept of a variable.
<b>D</b>	6.7 Write and solve one-step linear equations with one unknown variable.
<b>S</b>	6.8 Demonstrate an understanding that rate is a measure of one quantity per unit value of another quantity.
<b>B</b>	6.9 Write and evaluate an algebraic expression for a given solution, using up to three variables; solve with two known variables and one unknown variable.
<b>D</b>	6.10 Solve problems involving rates, average speed, distance, and time.
<b>D</b>	6.11 Use variables in expressions describing geometric quantities (e.g., $P = 2w + 2l$ , $A = \frac{1}{2}bh$ , $C=(\pi)(d)$ - the formulas for the perimeter of a rectangle, the area of a triangle, and the circumference of a circle, respectively).
<b>D</b>	6.12 Express how a change in one variable relates to a change in a second variable.
	6.13 Express in symbolic form simple relationships arising from geometry.
	<p><b>SPATIAL SENSE, GEOMETRY AND MEASUREMENT</b>            Demonstrate spatial sense and an understanding of geometry by visualizing and identifying the two- and three- dimensional objects, classifying shapes, recognizing symmetry, using transformations, applying geometric formulas, and evaluating properties of geometric figures. Classify two-dimensional shapes according to angle and side properties (acute, isosceles).</p> <p><b>1. Spatial Sense</b>            The student will:</p>
<b>S</b>	6.1 Identify planes of symmetry in three-dimensional figures.
<b>S</b>	6.2 Draw and assemble three-dimensional geometric figures.
	<p><b>2. Geometry</b>            The student will:</p>
<b>D</b>	6.1 Identify angles as vertical, adjacent, complementary, or supplementary.
<b>S</b>	6.2 Identify arc, chord, radius, and diameter.
<b>S</b>	6.3 Identify and use symbols that mean congruent, similar, parallel, perpendicular.
<b>S</b>	6.4 Construct parallel lines and a parallelogram.
<b>D</b>	6.5 Construct a perpendicular bisector.
<b>D</b>	6.6 Know the terms by which triangles are classified: By length of sides: equilateral, isosceles, scalene.

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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

	By angles: right, acute, obtuse.
<b>D</b>	6.7 Bisect a given angle.
<b>D</b>	6.8 Construct an angle congruent to a given angle.
<b>S</b>	6.9 Determine the degree measure of the third angle in a triangle when the other two angles are known.

<b>Everyday Math</b>	
<b>D</b>	6.10 Draw triangles and quadrilaterals from given information about them.
<b>D</b>	6.11 Using a compass, draw circles with a given radius.
<b>D</b>	6.12 Find the area of a circle given the radius, diameter, or circumference.
	<b>3. Measurement</b> The student will:
<b>S</b>	6.1 Find the area and perimeter of plane figures, or given the area or perimeter find the missing dimension. Rectangle: $A = lw$ $P = 2(l + w)$ Square $A = s^2$ $P = 4s$ Triangle $A = \frac{1}{2}bh$ $P = s_1 + s_2 + s_3$ Parallelogram $A = bh$ $P = 2(b + s)$
<b>S</b>	6.2 Know common estimates of pi (3.14 and $\frac{22}{7}$ ) and use this value to estimate and calculate the circumference and the area of circles; compare with actual measurements.
<b>D</b>	6.3 Know the formulas for the circumference and area of a circle.
<b>D</b>	6.4 Solve problems requiring conversion of units within the U.S. Customary System, and within the metric system
<b>D</b>	6.5 Associate prefixes used in metric system with quantities Kilo = thousand Hecto = hundred Dekka = ten Deci = tenth Centi = hundredth Milli = thousandth
<b>S</b>	6.6 Time: Solve problems on elapsed time; express parts of an hour in fractions and decimal form.
<b>S</b>	6.7 Distance: Solve problems on cumulative distance from one point to another with intermediate points.

**Key :**

**‘B’ = Beginning level outcomes; ‘D’ = Developing level outcomes; ‘S’ = Secure (mastery) level outcomes**

**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

	<p><b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b> Students will analyze, interpret, and display data in order to communicate information and make predictions and decisions. Furthermore, students will apply concepts of randomness and uncertainty to make judgments, predictions, and decisions about probabilistic situations.</p> <p><b>1. Data</b> The student will:</p>
S	6.1 Represent data using line plots, bar graphs, stem-and-leaf plots, and coordinate graphs.
S	6.2 Use the shape of the distribution to describe data.
	<p><b>2. Statistics</b> The student will:</p>
S	6.1 Understand the differences and appropriate use among the measures of central tendency (mean, median, mode).

<b>Everyday Math</b>	<p><b>3. Probability</b> The student will:</p>
S	6.1 Use data displayed in graphs and tables to find experimental probabilities.
S	6.2 Compare the outcomes from gathering data from experiments to the possible equally likely outcomes (experimental vs. theoretical probability).
	<p><b>MATHEMATICAL REASONING</b> Mathematical reasoning will be used by students in all of the four other areas (number sense, patterns, geometry, and data analysis). The depth of mathematical reasoning will increase as the skill level in the four other areas increases.</p> <p><b>1. Strategies</b> Develop and use problem-solving strategies: e.g., identifying relationships, distinguishing relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.</p> <p>The student will:</p>
D	6.1 Use graphical and numerical data to make appropriate estimates of quantities for a variety of problems.
D	6.2 Use estimation to verify the reasonableness of the solution in the context of the original situation.
D	6.3 Use estimates to predict approximate numerical results, e.g., including results obtained for a geometrical context.
D	6.4 Use simple arguments to recognize whether or not a particular solution should be considered feasible (makes sense). For example, a geometric figure cannot have negative area, a probability cannot be larger than 1, the perimeter of a rectangle should be at least twice the length of the diagonal, so solutions that violate those restrictions are not feasible.

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**COMPARATIVE ANALYSIS**  
**EVERYDAY MATHEMATICS AGAINST MN DRAFT 03/10/03**

	<b>2. Communication</b>
	The student will:
<b>D</b>	6.1 Present mathematical results in a variety of formats: in words, pictures, charts, graphs, tables, formulas, and choose an appropriate format for a given situation.
<b>D</b>	6.2 Convert mathematical results, when appropriate, from one format to another (for example, from a bar graph to a pie chart, from a pictorial description to a verbal description, from a formula to a graph).
<b>D</b>	6.3 Express common descriptive words and phrases, such as "proportional to," "greater than," "opposite," "total," in terms of appropriate mathematical symbols.
<b>D</b>	6.4 Support mathematical results with evidence in both verbal and symbolic work; explain why each step in a solution is valid and why a particular solution method is appropriate.

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