

Draft of Sixth Grade Math Standards for CMP

Month	Investigations	Standards
Bits & Pieces I		
Sept	Investigation 2	6.1.A Compare and order non-negative fractions, decimals, and integers using the number line, lists, and the symbols $<$, $>$, or $=$.
	Investigation 3	6.1.A Compare and order non-negative fractions, decimals, and integers using the number line, lists, and the symbols $<$, $>$, or $=$.
Oct	Investigation 4	6.3.A Identify and write ratios as comparisons of part-to-part and part-to-whole relationships.
		6.3.C Represent percents visually and numerically, and convert between the fractional, decimal, and percent representations of a number
Bits & Pieces II		
Nov	Investigation 3	6.1.B Represent multiplication and division of non-negative fractions and decimals using area models and the number line, and connect each representation to the related equation
		6.1.C Estimate products and quotients of fractions and decimals.
		6.1.D Fluently and accurately multiply and divide non-negative fractions and explain the inverse relationship between multiplication and division with fractions
		6.1.H Solve single- and multi-step word problems involving operations with fractions and decimals and verify the solutions.
	Investigation 4	6.1.B Represent multiplication and division of non-negative fractions and decimals using area models and the number line, and connect each representation to the related equation
		6.1.C Estimate products and quotients of fractions and decimals.
		6.1.D Fluently and accurately multiply and divide non-negative fractions and explain the inverse relationship between multiplication and division with fractions
		6.1.H Solve single- and multi-step word problems involving operations with fractions and decimals and verify the solutions.
Bits & Pieces III		
Dec	Investigation 1.1	6.5.A Use strategies for mental computations with non-negative whole numbers, fractions, and decimals. Bits & Pieces II (11#30), BP III (5-7)
	Investigation 2	6.1.B Represent multiplication and division of non-negative fractions and decimals using area models and the number line, and connect each representation to the related equation
		6.1.C Estimate products and quotients of fractions and decimals.
		6.1.D Fluently and accurately multiply and divide non-negative fractions and explain the inverse relationship between multiplication and division with fractions
		6.1.E Multiply and divide whole numbers and decimals by 1000, 100, 10, 1, 0.1, 0.01.
	Investigation 3	6.1.F Fluently and accurately multiply and divide non-negative decimals.
		6.1.B Represent multiplication and division of non-negative fractions and decimals using area models and the number line, and connect each representation to the related equation
		6.1.C Estimate products and quotients of fractions and decimals.
		6.1.D Fluently and accurately multiply and divide non-negative fractions and explain the inverse relationship between multiplication and division with fractions
		6.5.A Use strategies for mental computations with non-negative whole numbers, fractions, and decimals. 3.2 (38-39)
6.1.H Solve single- and multi-step word problems involving operations with fractions and decimals and verify the solutions.		
Jan	Investigation 4	6.3.C Represent percents visually and numerically, and convert between the fractional, decimal, and percent representations of a number
		6.3.D Solve single- and multi-step word problems involving ratios, rates, and percents, and verify the solutions..
	Supplement	6.1.G Describe the effect of multiplying or dividing a number by one, by zero, by a number between zero and one, and by a number greater than one. Bits & Pieces II 35D, (47#2)
		6.3.B Write ratios to represent a variety of rates. 6.5.B Locate positive and negative integers on the number line and use integers to represent quantities in various contexts. Bits & Pieces III (19 #58) 6.5.C Compare and order positive and negative integers using the number line, lists, and the symbols $<$, $>$, or $=$.

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Feb **Covering and Surrounding**

	Investigation 1.3	6.2.D Apply the commutative, associative, and distributive properties, and use the order of operations to evaluate mathematical expressions. (8-9)
	Investigation 5	6.3.E Identify the ratio of the circumference to the diameter of a circle as the constant π , and recognize $22/7$ and 3.14 as common approximations of π . 6.4.A Determine the circumference and area of circles. 6.4.B Determine the perimeter and area of a composite figure that can be divided into triangles, rectangles, and parts of circles. 6.4.C Solve single- and multi-step word problems involving the relationships among radius, diameter, circumference, and area of circles, and verify the solutions.
	Investigation 4.4	6.4.F Determine the surface area of a pyramid. (58-59)
	Supplement	6.4.D Recognize and draw two-dimensional representations of three-dimensional figures. (51) 6.4.E Determine the surface area and volume of rectangular prisms using appropriate formulas and explain why the formulas work. 6.4.G Describe and sort polyhedra by their attributes: parallel faces, types of faces, number of faces, edges, and vertices. (51 #39)

March

Variables and Patterns

	Investigations 1	6.2.A Write a mathematical expression or equation with variables to represent information in a table or given situation. 6.2.B Draw a first-quadrant graph in the coordinate plane to represent information in a table or given situation
	Investigation 2	6.2.A Write a mathematical expression or equation with variables to represent information in a table or given situation. 6.2.B Draw a first-quadrant graph in the coordinate plane to represent information in a table or given situation
April	Investigation 3	6.2.C Evaluate mathematical expressions when the value for each variable is given. 6.2.E Solve one-step equations and verify solutions.
	All Investigations	6.2.F Solve word problems using mathematical expressions and equations and verify solutions.

How Likely Is It?

May

	Investigation 1	6.3.F Determine the experimental probability of a simple event using data collected in an experiment.
	Investigation 2 & 3	6.3.G Determine the theoretical probability of an event and its complement and represent the probability as a fraction or decimal from 0 to 1, or as a percent from 0 to 100.
	Investigation 4	6.3.F Determine the experimental probability of a simple event using data collected in an experiment. 6.3.G Determine the theoretical probability of an event and its complement and represent the probability as a fraction or decimal from 0 to 1, or as a percent from 0 to 100.

Reasoning, Problem Solving and Communication

Skills to be integrated in all investigations.	6.6.A Analyze a problem situation to determine the question(s) to be answered. 6.6.B Identify relevant, missing, and extraneous information related to the solution to a problem. 6.6.C Analyze and compare mathematical strategies for solving problems, and select and use one or more strategies to solve a problem. 6.6.D Represent a problem situation, describe the process used to solve the problem, and verify the reasonableness of the solution. 6.6.E Communicate the answer(s) to the question(s) in a problem using appropriate representations, including symbols and informal and formal mathematical language. 6.6.F Apply a previously used problem-solving strategy in a new context. 6.6.G Extract and organize mathematical information from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning. 6.6.H Make and test conjectures based on data (or information) collected from explorations and experiments.
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