BENCHMARK COMPLEXITY REPORT
MATHEMATICS GRADE 6

ARCHDIOCESE OF CHICAGO

Key:
OCS Code = The benchmark code. Consists of Grade (K-8), Domain (2-3 character alpha code), Strand (1-3 character alpha code), Standard (1-9), Benchmark Number (1 or 1-1 and up), and Complexity (a, b, c).
Benchmark = The wording of the benchmark.
CCSS Code = Common Core State Standards, developed by National Governors Association Center for Best Practices, Council of Chief State School Officers (www.corestandards.org).
CRS Strand = ACT College Readiness Standards developed by ACT, Inc. (www.act.org).
The CRS Strands are: BOA = Basic Operations & Applications, PSD = Probability/Statistics/Data, NCP = Numbers/Concepts/Properties, XEI = Expression/Equation & Inequality,
GRE = Graphical Representations, PPF = Properties of Plane Fugures, MEA = Measurement, FUN = Functions.

a. Low Complexity				b. Intermediate Complexity				c. High Complexity			
OCS Code	Benchmark	CCSS Code	CRS Strand	OCS Code	Benchmark	CCSS Code	CRS Strand	OCS Code	Benchmark	CCSS Code	CRS Strand
DOMAIN: Standards for Mathematical Content											
Ratios and Proportional Relationships											
6.SMC.RP.1.1.a	Use ratio language to describe a ratio relationship between two quantities	6.RP.A.1	BOA	6.SMC.RP.1.3-1.b	Make tables of equivalent ratios relating quantities with whole number measurements	6.RP.A.3a	BOA	6.SMC.RP.1.3-5.c	Solve unit rate problems including those involving unit pricing and constant speed	6.RP.A.3b	BOA
6.SMC.RP.1.2-1.a	Compare a unit rate a/b with a ratio a:b with b ≠ 0	6.RP.A.2	BOA	6.SMC.RP.1.3-2.b	Find missing values in a table of equivalent ratios relating quantities with whole number measurements	6.RP.A.3a	BOA				
6.SMC.RP.1.2-2.a	Use rate language in the context of a ratio relationship	6.RP.A.2	BOA	6.SMC.RP.1.3-3.b	Plot pairs of values of equivalent ratios on the coordinate plane	6.RP.A.3a	GRE				
				6.SMC.RP.1.3-4.b	Compare equivalent ratios using tables	6.RP.A.3a	BOA				
				6.SMC.RP.1.3-6.b	Find a percent of a quantity as a rate per 100	6.RP.A.3c	BOA				
				6.SMC.RP.1.3-7.b	Solve problems by finding the whole, given a part and the percent	6.RP.A.3c	BOA				
				6.SMC.RP.1.3-8.b	Convert measurement units using ratio reasoning	6.RP.A.3d	BOA				
				6.SMC.RP.1.3-9.b	Manipulate measurement units when multiplying or dividing quantities	6.RP.A.3d	BOA				
				6.SMC.RP.1.3-10.b	Transform measurement units when multiplying or dividing quantities	6.RP.A.3d	BOA				
The Number System											
6.SMC.NS.2.2.a	Divide multi-digit numbers fluently using the standard algorithm	6.NS.B.2	BOA	6.SMC.NS.1.1-1.b	Interpret quotients of fractions	6.NS.A.1	BOA	6.SMC.NS.3.3-5.c	Use the distance from 0 on the number line to identify the absolute value of a rational number	6.NS.C.7c	GRE
6.SMC.NS.2.3.a	Add, subtract, multiply, and divide multi-digit decimals fluently using the standard algorithm for each operation	6.NS.B.3	BOA	6.SMC.NS.1.1-2.b	Compute quotients of fractions	6.NS.A.1	BOA	6.SMC.NS.3.3-6.c	Use the distance from 0 on the number line to interpret the absolute value as magnitude for a positive or negative quantity in a real-world situation	6.NS.C.7c	GRE
6.SMC.NS.3.2-1.a	Express opposite signs of numbers as indicating locations on opposite sides of 0 on the number line	6.NS.C.6a	GRE	6.SMC.NS.1.1-3.b	Solve word problems involving division of fractions by fractions	6.NS.A.1	BOA	6.SMC.NS.3.3-7.c	Distinguish comparisons of absolute value from statements about order	6.NS.C.7d	NCP
6.SMC.NS.3.2-2.a	Show that the opposite of the opposite of a number is the number itself	6.NS.C.6a	NCP	6.SMC.NS.2.4-1.b	Find the greatest common factor of two whole numbers less than or equal to 100	6.NS.B.4	NCP	6.SMC.NS.3.4.c	Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane	6.NS.C.8	GRE
6.SMC.NS.3.2-3.a	Show that 0 is its own opposite	6.NS.C.6a	NCP	6.SMC.NS.2.4-2.b	Find the least common multiple of two whole numbers less than or equal to 12	6.NS.B.4	NCP				
6.SMC.NS.3.2-6.a	Find integers and other rational numbers on a horizontal or vertical number line diagram	6.NS.C.6c	GRE	6.SMC.NS.2.4-3.b	Use the distributive property to express a sum of two whole numbers from 1 to 100 with a common factor as a multiple of a sum of two whole numbers with no common factor	6.NS.B.4	NCP				
6.SMC.NS.3.2-8.a	Find pairs of integers and other rational numbers on a coordinate plane	6.NS.C.6c	GRE	6.SMC.NS.3.1-1.b	Show that positive and negative numbers are used together to describe quantities having opposite directions or values	6.NS.C.5	NCP				
				6.SMC.NS.3.1-2.b	Explain the meaning of zero when using positive and negative numbers to represent quantities in real-world contexts	6.NS.C.5	NCP				
				6.SMC.NS.3.2-4.b	Show that signs of numbers in ordered pairs indicate locations in quadrants of the coordinate plane	6.NS.C.6b	GRE				
				6.SMC.NS.3.2-5.b	Show that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes in quadrants of the coordinate plane	6.NS.C.6b	GRE				

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				6.SMC.NS.3.2-7.b	Position integers and other rational numbers on a horizontal or vertical number line diagram	6.NS.C.6c	GRE				
				6.SMC.NS.3.2-9.b	Position pairs of integers and other rational numbers on a coordinate plane	6.NS.C.6c	GRE				
				6.SMC.NS.3.3-1.b	Use the relative position of two numbers on a number line diagram to interpret statements of inequality	6.NS.C.7a	GRE				
				6.SMC.NS.3.3-2.b	Write statements of order for rational numbers using real-world context	6.NS.C.7b	NCP				
				6.SMC.NS.3.3-3.b	Interpret statements of order for rational numbers using real-world contexts	6.NS.C.7b	NCP				
				6.SMC.NS.3.3-4.b	Explain statements of order for rational numbers using real-world contexts	6.NS.C.7b	NCP				
Expressions and Equations											
6.SMC.EE.1.1-1.a	Write numerical expressions involving whole-number exponents	6.EE.A.1	NCP	6.SMC.EE.1.2-2.b	Identify parts of an expression using mathematical terminology	6.EE.A.2b	XEI	6.SMC.EE.1.3.c	Apply the properties of operations to generate equivalent expressions	6.EE.A.3	XEI
6.SMC.EE.1.1-2.a	Evaluate numerical expressions involving whole-number exponents	6.EE.A.1	NCP	6.SMC.EE.1.2-3.b	Describe one or more parts of an expression as a single entity	6.EE.A.2b	XEI	6.SMC.EE.2.3-1.c	Solve real-world and mathematical problems by using equations of the form x + p = q for cases in which p, q and x are all nonnegative rational numbers	6.EE.B.7	XEI
6.SMC.EE.1.2-1.a	Write expressions that record operations with numbers and with letters standing for numbers	6.EE.A.2a	XEI	6.SMC.EE.1.2-4.b	Evaluate expressions at specific values of their variables	6.EE.A.2c	XEI	6.SMC.EE.2.3-2.c	Solve real-world and mathematical problems by using equations of the form px = q for cases in which p, x and q are all nonnegative rational numbers	6.EE.B.7	XEI
				6.SMC.EE.1.2-5.b	Use Order of Operations to perform arithmetic operations in the conventional order when there are no parentheses to specify a particular order	6.EE.A.2c	BOA	6.SMC.EE.2.4-1.c	Write an inequality of the form x > c or x < c to represent a real world or mathematical constraint or condition	6.EE.B.8	XEI
				6.SMC.EE.1.4.b	Determine the equivalency of two expressions	6.EE.A.4	XEI	6.SMC.EE.3.1-1.c	Solve a real world problem that uses variables to represent two quantities that change in relationship to one another	6.EE.C.9	PSD
				6.SMC.EE.2.1-1.b	Determine the set of values that make an equation or inequality true	6.EE.B.5	XEI	6.SMC.EE.3.1-2.c	Write an equation that expresses one quantity as the independent variable and the second quantity as the dependent variable	6.EE.C.9	PSD
				6.SMC.EE.2.1-2.b	Use substitution to determine whether a given number in a specified set makes an equation or inequality true	6.EE.B.5	XEI	6.SMC.EE.3.1-3.c	Analyze the relationship between the dependent and independent variables using graphs and tables	6.EE.C.9	PSD
				6.SMC.EE.2.2-1.b	Solve a real world or mathematical problem by writing expressions with variables representing numbers	6.EE.B.6	XEI	6.SMC.EE.3.1-4.c	Relate graphs and tables to a written equation that expresses one quantity as the independent variable and the second quantity as the dependent variable	6.EE.C.9	PSD
				6.SMC.EE.2.2-2.b	Show that a variable represents an unknown number or any number in a specified set	6.EE.B.6	XEI				
				6.SMC.EE.2.4-2.b	Show that inequalities of the form x > c or x < c have infinitely many solutions	6.EE.B.8	XEI				
				6.SMC.EE.2.4-3.b	Represent solutions of inequalities of the form x > c or x < c on number line diagrams	6.EE.B.8	XEI				
Geometry											
6.SMC.G.1.1-1.a	Find the area of right triangles, non-right triangles, special quadrilaterals, and polygons by composing into rectangles	6.G.A.1	MEA	6.SMC.G.1.3-1.b	Draw polygons in the coordinate plane given coordinates for the vertices	6.G.A.3	GRE	6.SMC.G.1.4-1.c	Represent three-dimensional figures using nets made up of rectangles and triangles	6.G.A.4	MEA
6.SMC.G.1.1-2.a	Find the area of right triangles, non-right triangles, special quadrilaterals, and polygons by decomposing into triangles and other shapes	6.G.A.1	MEA	6.SMC.G.1.3-2.b	Use coordinates in the coordinate plane to find the length of a side joining points with the same first or the same second coordinate	6.G.A.3	GRE	6.SMC.G.1.4-2.c	Use nets made up of rectangles and triangles representing three-dimensional figures to find the surface area of these figures	6.G.A.4	MEA
6.SMC.G.1.1-3.a	Solve real world problems by finding the area of right triangles, non-right triangles, special quadrilaterals, and polygons by composing into rectangles	6.G.A.1	MEA	G.SMC.G.1.3-3.b	Solve real world problems by drawing polygons in the coordinate plane and finding the length of a side joining points with the same first or the same second coordinate	6.G.A.3	GRE	6.SMC.G.1.4-3.c	Solve real world and mathematical problems by representing three-dimensional figures by using nets made up of rectangles and triangles	6.G.A.4	MEA

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6.SMC.G.1.1-4.a	Solve real world problems by finding the area of right triangles, non-right triangles, special quadrilaterals, and polygons by decomposing into triangles and other shapes	6.G.A.1	MEA								
6.SMC.G.1.2-1.a	Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths	6.G.A.2	MEA								
6.SMC.G.1.2-2.a	Compare the volume of a right rectangular prism with fractional edge lengths found by packing it with unit cubes of unit fraction edge lengths to the volume of a right rectangular prism found by multiplying edge lengths of the prism	6.G.A.2	MEA								
6.SMC.G.1.2-3.a	Solve real world and mathematical problems by applying the formula V = l w h to find volumes of right rectangular prisms with fractional edge lengths	6.G.A.2	MEA								
6.SMC.G.1.2-4.a	Solve real world and mathematical problems by applying the formula V = b h to find volumes of right rectangular prisms with fractional edge lengths	6.G.A.2	MEA								
Statistics and Probability											
6.SMC.SP.1.1.a	Identify a statistical question	6.SP.A.1	PSD	6.SMC.SP.1.2.b	Identify the characteristics of a statistical distribution of a set of data	6.SP.A.2	PSD	6.SMC.SP.2.2-3.c	Summarize numerical data sets in relation to their context by using quantitative measures of center	6.SP.B.5c	PSD
6.SMC.SP.2.1.a	Display numerical data in plots on a number line	6.SP.B.4	PSD	6.SMC.SP.1.3-1.b	Locate a measure of center for a numerical data set	6.SP.A.3	PSD	6.SMC.SP.2.2-4.c	Summarize numerical data sets in relation to their context by using quantitative measures of variability	6.SP.B.5c	PSD
				6.SMC.SP.1.3-2.b	Locate a measure of variation for a numerical data set	6.SP.A.3	PSD	6.SMC.SP.2.2-5.c	Summarize numerical data sets by describing overall patterns and deviations from the overall patterns with reference to the context in which the data were gathered	6.SP.B.5c	PSD
				6.SMC.SP.2.2-1.b	Summarize numerical data sets in relation to their context by reporting the number of observations	6.SP.B.5a	PSD	6.SMC.SP.2.2-6.c	Summarize numerical data sets by relating measures of center and variability to the shape of the data distribution in the context in which the data were gathered	6.SP.B.5d	PSD
				6.SMC.SP.2.2-2.b	Summarize numerical data sets in relation to their context by describing how it was measured and its units of measurement	6.SP.B.5b	PSD				

DOMAIN: Standards for Mathematical Practices

Solve Problems											
								6.SMP.1.c	Make sense of problems and persevere in solving them	MP1	
Reason											
								6.SMP.2.c	Reason abstractly and quantitatively	MP2	
Construct Arguments											
								6.SMP.3.c	Construct viable arguments and critique the reasoning of others	MP3	
Model											
								6.SMP.4.c	Model with mathematics	MP4	
Use Tools											
								6.SMP.5.c	Use appropriate tools strategically	MP5	
Attend to Precision											
								6.SMP.6.c	Attend to precision	MP6	
Use Structure											
								6.SMP.7.c	Look for and make use of structure	MP7	
Express Regularity											
								6.SMP.8.c	Look for and express regularity in repeated reasoning	MP8	