

Grade 3 ND Math Blueprint

			Fixed Form*	
Calculator Usage: None	DOK RANGES		MIN	MAX
	DOK 1		7	11
	DOK 2		22	27
	DOK 3		6	11
	Math Practice Sub-Score		DOK	
	Modeling and Problem Solving		2,3	8 13
	Use Mathematical Reasoning		2,3	11 18
Domain		DOK	Total	
Cluster			42	42
Standard			MIN	MAX
OA	Operations and Algebraic Thinking		13	16
A	Represent and solve problems involving multiplication and division.	1,2,3	1	6
	3.OA.1		0	2
	3.OA.2		0	2
	3.OA.3		0	2
	3.OA.4		0	2
B	Understand the properties of multiplication and the relationship between multiplication and division.	1,2,3	1	5
	3.OA.5		0	3
	3.OA.6		0	3
C	Multiply and divide within 100.	1,2	0	3
	3.OA.7		0	3
D	Solve problems involving the four operations, and identify and explain patterns in arithmetic.	2,3	1	5
	3.OA.8		0	3
	3.OA.9		0	3
NBT	Number and Operations in Base Ten		8	10
E	Use place value understanding and properties of operations to perform multi-digit arithmetic.	1,2	8	10
	3.NBT.1		2	5
	3.NBT.2		2	5
	3.NBT.3		2	5
NF	Number and Operations - Fractions		8	10
F	Develop understanding of fractions as numbers.	1,2,3	8	10
	3.NF.1		1	2
	3.NF.2(ab)		2	6
	3.NF.3(abcdef)		2	6
MD	Measurement, Data and Geometry		10	12
G	Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	1,2,3	1	4
	3.MD.1		0	2
	3.MD.2		0	2
H	Represent and interpret data.		1	4
	3.MD.3		0	2
	3.MD.4		0	2
I	Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	1,2,3	1	4
	3.MD.5(ab)		0	2
	3.MD.6			
	3.MD.7(abcd)		0	2
J	Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	1,2,3	0	2
	3.MD.8		0	2
K	Reason with shapes and their attributes.	1,2,3	1	4
	3.G.1		0	2
	3.G.2		0	2
TOTAL ITEMS (for reporting categories)			39	48
			42	

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Grade 4 ND Math Blueprint

			Fixed Form*		
DOK RANGES			MIN	MAX	
Calculator Usage: None	DOK 1		7	11	
	DOK 2		22	27	
	DOK 3		6	11	
	Math Practice Sub-Score		DOK	MIN	MAX
	Modeling and Problem Solving		2,3	11	18
	Use Mathematical Reasoning		2,3	10	17
Domain			Total		
Cluster			42	42	
Standard			MIN	MAX	
OA	Operations and Algebraic Thinking		10	13	
A	Use the four operations with whole numbers to solve problems.	1,2,3	3	7	
	4.OA.1		1	4	
	4.OA.2		1	4	
	4.OA.3		1	4	
B	Gain familiarity with factors and multiples.	1,2	1	4	
	4.OA.4		1	4	
C	Generate and analyze patterns.	2	1	4	
	4.OA.5		1	4	
NBT	Number and Operations - Base Ten		9	11	
D	Generalize place value understanding for multi-digit whole numbers.	1,2,3	3	6	
	4.NBT.1		0	4	
	4.NBT.2		0	4	
	4.NBT.3		0	4	
E	Use place value understanding and properties of operations to perform multi-digit arithmetic.	1,2,3	3	6	
	4.NBT.4		0	4	
	4.NBT.5		0	4	
	4.NBT.6		0	4	
NF	Number and Operations - Fractions		9	11	
F	Extend understanding of fraction equivalence and ordering.	1,2,3	1	4	
	4.NF.1		0	2	
	4.NF.2		0	2	
G	Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	1,2,3	1	4	
	4.NF.3(abcd)		0	2	
	4.NF.4(abc)		0	2	
H	Understand decimal notation for fractions, and compare decimal fractions.	2,3	1	6	
	4.NF.5		0	3	
	4.NF.6		0	3	
	4.NF.7		0	3	
MD	Measurement, Data and Geometry		10	12	
I	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	1,2,3	1	5	
	4.MD.1		0	2	
	4.MD.2		0	2	
	4.MD.3		0	2	
J	Represent and interpret data.	2,3	0	2	
	4.MD.4		0	2	
K	Geometric measurement: understand concepts of angle and measure angles.	1,2	1	6	
	4.MD.5(ab)		0	2	
	4.MD.6		0	2	
	4.MD.7		0	2	
L	Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	1,2,3	1	6	
	4.G.1		0	3	
	4.G.2		0	3	
	4.G.3		0	3	
TOTAL ITEMS (for reporting categories)			38	47	
			42		

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			Fixed Form*	
DOK RANGES			MIN	MAX
DOK 1			7	11
DOK 2			22	27
DOK 3			6	11
Math Practice Sub-Score			DOK	MIN MAX
Modeling and Problem Solving			2,3	8 14
Use Mathematical Reasoning			2,3	9 16

Calculator Usage: None				Fixed Form*	
Domain		DOK	Total		
Cluster			42	42	
Standard			MIN	MAX	
OA	Operations and Algebraic Thinking		10	13	
A	Write and interpret numerical expressions.	2,3	4	9	
	5.OA.1		1	6	
	5.OA.2		1	6	
B	Analyze patterns and relationships.	2,3	0	4	
	5.OA.3		0	4	
B2	Gain familiarity with factors and multiples.	2,3	0	2	
	5.OA.4		0	2	
NBT	Number and Operations in Base Ten		9	11	
C	Understand the place value system.	1,2	3	6	
	5.NBT.1		0	2	
	5.NBT.2		0	2	
	5.NBT.3(ab)		0	2	
	5.NBT.4		0	2	
D	Perform operations with multi-digit whole numbers with decimals.	1,2,3	3	6	
	5.NBT.5		0	2	
	5.NBT.6		0	2	
	5.NBT.7		0	2	
NF	Number and Operations - Fractions		9	11	
E	Use equivalent fractions as a strategy to add and subtract fractions.	2,3	2	4	
	5.NF.1		0	2	
	5.NF.2		0	2	
F	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	1,2,3	5	7	
	5.NF.3		0	2	
	5.NF.4(ab)		0	2	
	5.NF.5(abc)		0	2	
	5.NF.6		0	2	
	5.NF.7(abc)		0	2	
MD	Measurement, Data and Geometry		10	12	
G	Convert like measurement units within a given measurement.	1,2	0	2	
	5.MD.1		0	2	
H	Represent and interpret data.	1,2,3	0	2	
	5.MD.2		0	2	
I	Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	1,2,3	1	6	
	5.MD.3(ab)		0	2	
	5.MD.4		0	2	
	5.MD.5(abcd)		0	2	
J	Graph points on the coordinate plane to solve real-world and mathematical problems.	1,2,3	0	2	
	5.G.1		0	2	
	5.G.2		0	2	
K	Classify two-dimensional figures into categories based on their properties.	2,3	0	2	
	5.G.3		0	2	
	5.G.4		0	2	
TOTAL ITEMS (for reporting categories)			38	47	
			42		

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Grade 6 ND Math Blueprint

Fixed Form*

Calculator Usage: Split

DOK RANGES			MIN	MAX
DOK 1			7	11
DOK 2			22	27
DOK 3			6	11
Math Practice Sub-Score		DOK	MIN	MAX
Modeling and Problem Solving		2,3	12	22
Use Mathematical Reasoning		2,3	8	15

Domain		DOK	Total	
Cluster			42	42
Standard			MIN	MAX
Non-Calculator Total			25	25
RP	Ratios and Proportional Relationships and Number Systems		12	15
A	Understand ratio concepts and use ratio reasoning to solve problems.	1,2,3	5	10
	6.RP.1		1	5
	6.RP.2		1	5
	6.RP.3(abcd)		1	5
B	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	2,3	0	2
	6.NS.1		0	2
C	Compute fluently with multi-digit numbers and find common factors and multiples.	1,2	1	5
	6.NS.2		0	2
	6.NS.3		0	2
	6.NS.4		0	2
D	Apply and extend previous understandings of numbers to the system of rational numbers.	2,3	1	5
	6.NS.5		0	2
	6.NS.6(ab)		0	2
	6.NS.7(abcd)		0	2
	6.NS.8		0	2
EE	Expressions and Equations		10	13
E	Apply and extend previous understandings of arithmetic to algebraic expressions.	1,2	3	9
	6.EE.1		0	3
	6.EE.2(abc)		0	3
	6.EE.3		0	3
	6.EE.4		0	3
F	Reason about and solve one-variable equations and inequalities.	1,2,3	3	9
	6.EE.5		0	2
	6.EE.6		0	2
	6.EE.7		1	4
	6.EE.8		1	4
G	Represent and analyze quantitative relationships between dependent and independent variables.	2,3	0	2
	6.EE.9		0	2
TOTAL ITEMS (for Non-Calculator reporting categories)			22	28
Basic Calculator Total			17	17
G	Geometry		8	9
H	Solve real-world and mathematical problems involving area, surface area, and volume.	1,2,3	8	9
	6.G.1		0	3
	6.G.2		0	3
	6.G.3		0	3
	6.G.4		0	3
SP	Statistics and Probability		8	9
I	Develop understanding of statistical variability.	1,2	4	5
	6.SP.1		0	2
	6.SP.2		0	2
	6.SP.3		0	2
J	Summarize and describe distributions.	1,2,3	3	4
	6.SP.4		0	3
	6.SP.5(abcd)		0	3
TOTAL ITEMS (for Calculator reporting categories)			16	18
			42	

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			Fixed Form*	
Calculator Usage: Scientific	DOK RANGES		MIN	MAX
	DOK 1		7	11
	DOK 2		22	27
	DOK 3		6	11
	Math Practice Sub-Score		DOK	MIN MAX
	Modeling and Problem Solving		2,3	12 28
Use Mathematical Reasoning		2,3	12 22	
Domain			Total	
Cluster			42	42
Standard			MIN	MAX
RP	Ratios and Proportional Relationships and Number Systems		10	12
A	Analyze proportional relationships and use them to solve real-world and mathematical problems.		1,2,3	3 7
	7.RP.1			0 4
	7.RP.2(abcd)			0 4
	7.RP.3			0 4
B	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.		1,2,3	3 7
	7.NS.1(abcd)			0 4
	7.NS.2(abcd)			0 4
	7.NS.3			0 4
EE	Expressions and Equations		10	12
C	Use properties of operations to generate equivalent expressions.		1,2,3	3 7
	7.EE.1			0 4
	7.EE.2			0 4
D	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.		1,2,3	3 7
	7.EE.3			0 4
	7.EE.4(ab)			0 4
G	Geometry		10	12
E	Draw, construct, and describe geometrical figures and describe the relationships between them.		2,3	3 7
	7.G.1			0 3
	7.G.2			0 3
	7.G.3			0 3
F	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.		1,2,3	3 7
	7.G.4			0 3
	7.G.5			0 3
	7.G.6			0 3
SP	Statistics and Probability		10	12
G	Use random sampling to draw inferences about a population.		1,2	1 4
	7.SP.1			0 2
	7.SP.2			0 2
H	Draw informal comparative inferences about two populations.		1,2,3	1 4
	7.SP.3			0 2
	7.SP.4			0 2
H	Investigate chance processes and develop, use, and evaluate probability models.		1,2,3	3 7
	7.SP.5			0 2
	7.SP.6			0 2
	7.SP.7(ab)			0 2
	7.SP.8(abc)			0 2
TOTAL ITEMS (for reporting categories)			40	48
			42	

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			Fixed Form*	
Calculator Usage: Scientific	DOK RANGES		MIN	MAX
	DOK 1		7	11
	DOK 2		22	27
	DOK 3		6	11
	Math Practice Sub-Score		DOK	MIN MAX
	Modeling and Problem Solving		2,3	12 26
	Use Mathematical Reasoning		2,3	12 19
Domain			Total	
Cluster			42	42
Standard			MIN	MAX
EE	Expressions and Equations and Number Systems		12	15
A	Know that there are numbers that are not rational, and approximate them by rational numbers.	1,2	0	2
	8.NS.1		0	2
	8.NS.2		0	2
B	Work with radicals and integer exponents	1,2	1	5
	8.EE.1		0	2
	8.EE.2		0	2
	8.EE.3		0	2
	8.EE.4		0	2
C	Understand the connections between proportional relationships, lines, and linear equations.	1,2,3	1	5
	8.EE.5		0	3
	8.EE.6		0	3
D	Analyze and solve linear equations and pairs of simultaneous linear equations.	1,2,3	1	5
	8.EE.7(ab)		0	3
	8.EE.8(abc)		0	3
F	Functions		10	12
E	Define, evaluate, and compare functions.	1,2,3	3	7
	8.F.1		1	4
	8.F.2		1	4
	8.F.3		1	4
F	Use functions to model relationships between quantities.	1,2,3	3	7
	8.F.4		1	4
	8.F.5		1	4
G	Geometry		9	10
G	Understand congruence and similarity using physical models, transparencies, or geometric software.	1,2,3	2	7
	8.G.1(abc)		0	2
	8.G.2		0	2
	8.G.3		0	2
	8.G.4		0	2
	8.G.5(abc)		0	2
H	Understand and apply the Pythagorean Theorem.	1,2,3	1	5
	8.G.6		0	2
	8.G.7		0	2
	8.G.8		0	2
I	Solve real-world problems involving volume cylinders, cones, spheres.	1,2,3	0	2
	8.G.9		0	2
SP	Statistics and Probability		8	9
J	Investigate patterns of association in bivariate data.	1,2,3	8	9
	8.SP.1		0	3
	8.SP.2		0	3
	8.SP.3		0	3
	8.SP.4		0	3
TOTAL ITEMS (for reporting categories)			39	46
			42	

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		Fixed Form*		
		MIN	MAX	
Calculator Usage: Graphing		DOK RANGES		
		DOK 1	8	0
		DOK 2	0	0
		DOK 3	8	0
		Math Practice Sub-Score	MIN	MAX
		Modeling and Problem Solving	8	18
Use Mathematical Reasoning		8	12	
Domain		Total		
Cluster		42	42	
Standard		MIN	MAX	
Algebra		11	11	
The Real Number System		0	1	
N.RN.4	Use properties of rational and irrational numbers	0	1	
Seeing Structure and Expressions		0	1	
A.SSE.3(ab)	Write expressions in equivalent forms to solve problems	0	1	
Arithmetic with Polynomials and Rational Expressions		0	1	
A.APR.1	Perform arithmetic operations on polynomials	0	1	
Creating Equations		2	4	
A.CED.1	Create equations that describe numbers or relationships.	0	1	
A.CED.2		0	1	
A.CED.3		0	1	
A.CED.4		0	1	
Reasoning with Equations and Inequalities		3	7	
A.REI.1	Understand solving equations as a process of reasoning and explain the reasoning.	0	1	
A.REI.3	Solve equations and inequalities in one variable.	0	1	
A.REI.4(ab)		0	1	
A.REI.6	Solve systems of equations.	0	1	
A.REI.10	Represent and solve equations and inequalities graphically.	0	1	
A.REI.11		0	1	
A.REI.12		0	1	
Functions		12	12	
Interpreting Functions		2	6	
F.IF.1	Understand the concept of a function and use function notation.	0	1	
F.IF.2		0	1	
F.IF.3		0	1	
F.IF.4		0	1	
F.IF.5	Interpret functions that arise in applications in terms of the context.	0	1	
F.IF.6		0	1	
F.IF.7(ae)	Analyze functions using different representations.	0	1	
F.IF.9		0	1	
Building Functions		1	2	
F.BF.1(ab)	Build a function that models a relationship between two quantities.	0	1	
F.BF.3	Build new functions from existing functions.	0	1	
Linear, Quadratic, and Exponential		2	4	
F.LE.1	Construct and compare linear, quadratic, and exponential models and solve problems.	0	1	
F.LE.2		0	1	
F.LE.3		0	1	
F.LE.5	Interpret expressions for functions in terms of the situation they model.	0	1	
Geometry		11	11	
Congruency		4	9	
G.CO.1	Experiment with transformations in the plane	0	1	
G.CO.2		0	1	
G.CO.3		0	1	
G.CO.4		0	1	
G.CO.5		0	1	
G.CO.6	Understand congruence in terms of rigid motions	0	1	
G.CO.7		0	1	
G.CO.8		0	1	
G.CO.9	Prove and apply geometric theorems	0	1	
G.CO.10		0	1	
G.CO.11		0	1	
Prove theorems involving similarity		0	1	
G.SRT.5	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.	0	1	
Expressing Geometric Properties with Equations		0	3	
G.GPE.4	Use coordinates to prove simple geometric theorems algebraically.	0	1	
G.GPE.5		0	1	
G.GPE.7		0	1	
Geometric Measurement and Dimension		0	2	
G.GMD.2	Explain surface area and volume formulas and use them to solve problems	0	1	
G.GMD.3		0	1	
Statistics and Probability		8	8	
Interpreting Categorical and Quantitative Data		4	8	
S.ID.1	Summarize, represent, and interpret data on a single count or measurement variable.	0	2	
S.ID.2		0	2	
S.ID.3		0	2	
S.ID.5		0	2	
S.ID.6 (a)	Summarize, represent, and interpret data on two categorical and quantitative variables	0	2	
S.ID.7		0	2	
Conditional Probability and the Rules of Probability		0	4	
S.CP.2	Understand independence and conditional probability and use them to interpret data	0	2	
S.CP.3		0	2	
TOTAL ITEMS (for reporting categories)		42	42	
		42		

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