



Math Teachers Press, Inc.

4850 Park Glen Road, Minneapolis, MN 55416
 phone (800) 852-2435 fax (952) 546-7502

CKP 7/06

LOUISIANA GRADE LEVEL EXPECTATIONS TO MOVING WITH MATH® EXTENSIONS GRADE 8

	Student Book	Skill Builders
NUMBER AND NUMBER RELATIONS		
1. Compare rational numbers using symbols (i.e., $<$, \leq , $=$, \geq , $>$) and position on a number line (N-1-M) (N-2-M)	17, 39	11-1 to 11-3, 48-1, 48-2
2. Use whole number exponents (0-3) in problem-solving context (N-1-M) (N-5-M)	5	6-1, 6-2
3. Estimate the answer to an operation involving rational numbers based on the original numbers (N-2-M) (N-6-M)	2, 28, 37	5-1, 19-1, 19-2, 44-1
4. Read and write numbers in scientific notation with positive exponents (N-3-M)		57-1, 57-2
5. Simplify expressions involving operations on integers, grouping symbols, and whole number exponents using order of operations (N-4-M)		59-1
6. Identify missing information or suggest a strategy for solving a real-life, rational-number problem (N-5-M)	9-11, 23, 25, 40	9-1, 24-1, 26-2, 43-1 to 43-3
7. Use proportional reasoning to model and solve real-life problems (N-8-M)	35, 36, 40	26-1, 26-2, 46-1 to 46-3
8. Solve real-life problems involving percentages, including percentages less than 1 or greater than 100 (N-8-M) (N-5-M)	34, 38, 39	25-1, 25-2, 27-1, 28-1, 51-1
9. Find unit/cost rates and apply them in real-life problems (N-8-M) (N-5-M) (A-5-M)	33	27-1, 28-1
ALGEBRA		
10. Write real-life meanings of expressions and equations involving rational numbers and variables (A-1M) (A-5-M)	9-11, 23, 25, 40	9-1, 24-1, 26-2, 43-1 to 43-3
11. Translate real-life situations that can be modeled by linear or exponential relationships to algebraic expressions, equations, and inequalities (A-1-M) (A-4-M) (A-5-M)	9-11, 23, 25, 40	9-1, 24-1, 26-2, 43-1 to 43-3
12. Solve and graph solutions of multi-step linear equations and inequalities (A-2-M)	25, 75-80	50-1 to 50-3
13. Switch between functions represented as tables, equations, graphs, and verbal representations, with and without technology (A-3-M) (P-2-M) (A-4-M)		20-1, 20-2

		Student Book	Skill Builders
14.	Construct a table if x - and y -values satisfying a linear equation and construct a graph of the line on the coordinate plane (A-3-M) (A-2-M)		
15.	Describe and compare situations with constant or varying rates of change (A-4-M)	56 (T.G.)	
16.	Explain and formulate generalizations about how a change in one variable results in a change in another variable (A-4-M)	58 (T.G.)	
	MEASUREMENT		
17.	Determine the volume and surface area of prisms and cylinders (M-1-M) (G-7-M)	61-66	40-1, 41-1, 41-2, 55-1, 55-2
18.	Apply rate of change in real-life problems, including density, velocity, and international monetary conversions (M-1-M) (N-8-M) (M-6-M)	56, 57	35-1, 37-1, 37-2
19.	Demonstrate an intuitive sense of the relative sizes of common units of volume in relation to real-life applications and use this sense when estimating (M-2-M) (M-3-M)	65, 66	41-1, 41-2
20.	Identify and select appropriate units for measuring volume (M-3-M)	65, 66	41-1, 41-2
21.	Compare and estimate measurements of volume and capacity within and between the U.S. and metric systems (M-4-M) (G-1-M)	65, 66	41-1, 41-2
22.	convert units of volume/capacity within systems for U.S. and metric units (M-5-M)	56, 57	37-1, 37-2
	GEOMETRY		
23.	Define and apply the <i>terms measure, distance, midpoint, bisect, bisector, and perpendicular bisector</i> (G-2-M)		32-1
24.	Demonstrate conceptual and practical understanding of symmetry, similarity, and congruence and identify similar and congruent figures (G-2-M)	47, 52, 53	32-1, 32-2, 46-3, 53-1
25.	Predict, draw, and discuss the resulting changes in lengths, orientation, angle, measures, and coordinates when figures are translated, reflected across horizontal or vertical lines, and rotated on a grid (G-3-M) (G-6-M)	46	
26.	Predict, draw, and discuss the resulting changes in lengths, orientation, and angle measures that occur in figures under a similarity transformation (dilation) (G-3-M) (G-3-M) (G-6-M)	46	
27.	Construct polyhedral using 2-dimensional patterns (nets) (G-4-M)		
28.	Apply concepts, properties, and relationships of adjacent, corresponding, vertical, alternate interior, complementary, and supplementary angles (G-5-M)	43, 48, 49	29-1, 32-1, 32-2, 33-1, 33-2

		Student Book	Skill Builders
29.	Solve problems involving lengths off sides of similar triangles (G-5-M) (A-5-M)		53-1
30.	Construct, interpret, and use scale drawings in real-life situations (G-5-M) (M-6-M) (N-8-M)		46-2
31.	Use area to justify the Pythagorean theorem and apply the Pythagorean theorem and its converse in real-life problems (G-5-M) (G-7-M)	54, 55	54-1
32.	Model and explain the relationship between the dimensions of a rectangular prism and its volume (i.e. how scale change in linear dimension(s) affects volume) (G-5-M)	65 (T.G.)	
33.	Graph solutions to real-life problems in the coordinate plane (G-6-M)	70	49-1
	DATA ANALYSIS, PROBABILITY, AND DISCRETE MATH		
34.	Determine what kind of data display is appropriate for a given situation (D-1-M)	14	47-2
35.	Match a data set or graph to a described situation, and vice versa (D-1-M)	15, 16	
36.	Organize and display data using circle graphs (D-1-M)		
37.	Collect and organize data using box-and-whisker plots and use the plots to interpret quartiles and range (D-1-M) (D-2-M)		
38.	Sketch and interpret a trend line (i.e., line of best fit) on a scatterplot (D-2-M) (A-4-M) (A-5-M)		
39.	Analyz4 and make predictions from discovered data patterns (D-2-M)		
40.	Explain factors in a data set that would affect measures of central tendency (e.g., impact of extreme values) and discuss which measure is most appropriate for a given situation (D-2-M)	13	45-1, 47-1
41.	Select random samples that are representative of the population, including sampling with and without replacement, and explain the effect of sampling on bias (d-2-M) (D-4-M)		
42.	Use lists, tree diagrams, and tables to apply the concept of permutations to represent an ordering with and without replacement (D-4-M)		
43.	Use lists and tables to apply the concept of combinations to represent the number of possible ways a set of objects can be selected from a group (D-4-M)	8 (T.G.)	
44.	Use experimental data presented in tables and graphs to make outcome predictions of independent events (D-5-M)		

		Student Book	Skill Builders
45.	Calculate, illustrate, and apply single- and multiple-event probabilities, including mutually exclusive, independent events and non-mutually exclusive, dependent events (D-5-M)	26	47-3
PATTERNS, RELATIONS, AND FUNCTIONS			
46.	Distinguish between and explain when real-life numerical patterns are linear/arithmetic (i.e. grows by addition) or exponential/geometric (i.e. grows by multiplication) (P-1-M) (P-4-M)	8	42-1
47.	Represent the n th term in a pattern as a formula and test the representation (P-1-M) (P-2-M) (P-3-M) (A-5-M)		
48.	Illustrate patterns of change in dimension(s) and corresponding changes in volumes of rectangular solids (P-3-M)		