



# Math Teachers Press, Inc.

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CKP 7/06

## LOUISIANA GRADE LEVEL EXPECTATIONS TO MOVING WITH MATH® *EXTENSIONS* GRADE 7

	Student Book	Skill Builders
<b>NUMBER AND NUMBER RELATIONS</b>		
1. Recognize and compute equivalent representations of fractions, decimals, and percents (i.e., halves, thirds, fourths, fifths, eighths, tenths, hundredths) ( <b>N-1-M</b> )	24, 26, 27, 37, 38, 47, 48, 52	11-1 to 11-3, 11-5, 20-1, 25-1, 25-2, 26-1
2. Compare positive fractions, decimals, percents, and integers using symbols (i.e., $<$ , $\leq$ , $=$ , $\geq$ , $>$ ) and position on a number line ( <b>N-2-M</b> )	2, 23, 25	11-4
3. Solve order of operations problems involving grouping symbols and multiple operations ( <b>N-4-M</b> )		
4. Model and apply the distributive property in real-life applications ( <b>N-4-M</b> )		2-2
5. Multiply and divide positive fractions and decimals ( <b>N-5-M</b> )	30-33, 41-43, 45	14-1, 14-2, 15-1, 16-1, 16-2, 17-1, 22-1, 22-2, 23-1, 24-1
6. Set up and solve simple percent problems using various strategies, including mental math ( <b>N-5-M</b> ) ( <b>N-6-M</b> ) ( <b>N-8-M</b> )	46, 47, 51-53	27-1
7. Select and discuss appropriate operations and solve single- and multi-step, real-life problems involving positive fractions, percents, mixed number, decimals, and positive and negative integers ( <b>N-5-M</b> ) ( <b>N-3-M</b> ) ( <b>N-4-M</b> )	13-15	28-1, 43-1 to 43-6
8. Determine the reasonableness of answers involving positive fractions and decimals by comparing them to estimates ( <b>N-6-M</b> ) ( <b>N-7-M</b> )	3, 12, 34, 35	19-1, 19-2, 44-1, 44-2
9. Determine when an estimate is sufficient and when an exact answer is needed in real-life problems using decimals and percents ( <b>N-7-M</b> ) ( <b>N-5-M</b> )	34, 35	44-1, 44-2
10. Determine and apply rates and ratios ( <b>N-8-M</b> )	49, 51	46-1
11. Use proportions involving whole numbers to solve real-life problems ( <b>N-8-M</b> )	50	27-1, 27-2, 46-1, 46-2
<b>ALGEBRA</b>		
12. Evaluate algebraic expressions containing exponents (especially 2 and 3) and square roots, using substitution ( <b>A-1-M</b> )	6	6-1, 6-2

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13.	Determine the square root of perfect squares and mentally approximate other square roots by identifying the two whole numbers between which they fall (A-1-M)		
14.	Write a real-life meaning of a simple algebraic equation or inequality, and vice versa (A-1-M) (A-5-M)	21, 22	50-1
15.	Match algebraic inequalities with equivalent verbal statements and vice versa (A-1-M)	21, 22	50-1
16.	Solve one- and two-step equations and inequalities (with one variable) in multiple ways (A-2-M0)	15	
17.	Graph solutions sets of one-step equations and inequalities as points, or open and closed rays on a number line (e.g., $x = 5$ , $x < 5$ , $x \leq 5$ , $x > 5$ , $x \geq 5$ ) (A-2-M)		
18.	Describe linear, multiplicative, or changing growth relationships (e.g., 1, 3, 6, 10, 15, 21, ...) verbally and algebraically (A-3-M) (A-4-M) (P-1-M)	44	42-1
19.	Use <i>function machines</i> to determine and describe the rule that generates outputs from given inputs (A-4-M) (P-3-M)	16, 38	20-1
	<b>MEASUREMENT</b>		
20.	Determine the perimeter and area of composite plane figures by subdivision and area addition (M-1-M) (G-7-M)	66, 69, 70, 73, 74	38-1, 38-2, 40-1, 40-2
21.	Compare and order measurements within and between the U.S. and metric systems in terms of common reference points (e.g., weight/mass and area) (M-4-M) (G-1-M)		
22.	Convert between units of area in U.S. and metric units within the <b>same</b> system (M-5-M)	67, 68	35-1, 37-1
23.	Demonstrate an intuitive sense of comparisons between degrees Fahrenheit and Celsius in real-life situations using common reference points (M-5-M0)		
	<b>GEOMETRY</b>		
24.	Identify and draw angles (using protractors), circles, diameters, radii, altitudes, and 2-dimensional figures with given specifications (G-2-M)	54-59, 61	29-1, 30-1, 30-2, 33-1
25.	Draw the results of reflections and translations of geometric shapes on a coordinate grid (G-3-M)	60	32-1
26.	Recognize $\pi$ as the ratio between the circumference and diameter of any circle (i.e., $\pi = C/d$ or $\pi = C/2r$ ) (G-5-M)	72 (T.G.)	
27.	Model and explain the relationship between perimeter and area (how scale change in a linear dimension affects perimeter and area) and between circumference and area of a circle (G-5-M)	69 (T.G.)	
28.	Determine the radius, diameter, circumference, and area of a circle and apply these measures in real-life problems (G-5-M) (G-7-M) (M-6-M)	55, 71	29-1, 39-1

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29.	Plot points on a coordinate grid in all 4 quadrants and locate the coordinates of a missing vertex in a parallelogram (G-6-M) (A-5-M)	19	49-1
30.	Apply the knowledge that the measures of the interior angles in a triangle add up to 180 degrees (G-7-M)		
<b>DATA ANALYSIS, PROBABILITY, AND DISCRETE MATH</b>			
31.	Analyze and interpret circle graphs, and determine when a circle graph is the most appropriate type of graph to use (D-2-M)	80	47-3
32.	Describe data in terms of patterns, clustered data, gaps, and outliers (D-2-M)	18, 78-80	47-2
33.	Analyze discrete and continuous data in real-life applications (D-2-M) (D-6-M)	17, 18, 78-80	45-1, 45-2, 47-2
34.	Create and use Venn diagrams with three overlapping categories to solve counting logic problems (D-3-M)		
35.	Use informal thinking procedures of elementary logic involving <i>if/then</i> statements (D-3-M)		
36.	Apply the fundamental counting principle in real-life situations (D-4-M)		47-4
37.	Determine probability from experiments and from data displayed in tables and graphs (D-5-M)	77	47-1
38.	Compare theoretical and experimental probability in real-life situations (D-5-M)	77	47-1
<b>PATTERNS, RELATIONS, AND FUNCTIONS</b>			
39.	Analyze and describe simple exponential number patterns (e.g., 3, 9, 27 or $3^1, 3^2, 3^3$ ) (P-1-M)	44	42-1
40.	Analyze and verbally describe real-life additive and multiplicative patterns involving fractions and integers (P-1-M) (P-4-M)	44	42-1
41.	Illustrate patterns of change in length(s) of sides and corresponding changes in areas of polygons (P-3-M)		