Prentice Hall Mathematics, Course 1 © 2008
Correlated to:
NECAP Grade Level Expectations (GLEs) for Math Grade 6

NECAP GRADE LEVEL EXPECTATIONS FOR MATH GRADE 6	PAGE(S) WHERE TAUGHT (If submission is not a text, cite appropriate resource(s))
Number and Operations	
M(N&O)–6–1 **Demonstrates conceptual understanding of rational numbers with respect to** ratios (comparison of two whole numbers by division a/b, $a : b$, and $a \div b$, where $b \neq 0$); and rates (e.g., a out of b, 25%) **using models, explanations, or other representations***.	**SE/TE:** 306-309, 310, 312-315, 319, 325, 330, 339, 351, 352, 354, 356, 365, 486, 624, 625
M(N&O)–6–2 **Demonstrates understanding of the relative magnitude of numbers** by ordering or comparing numbers with whole number bases and whole number exponents (e.g., 3^3, 4^3), integers, or rational numbers within and across number formats (fractions, decimals, or whole number percents from 1-100) using number lines or equality and inequality symbols.	**SE/TE:** 26-30, 35, 41, 47, 53, 54, 156, 192-195, 199-200, 304, 316, 334, 514, 520-522, 566
M(N&O)–6–3 **Demonstrates conceptual understanding of mathematical operations** by describing or illustrating the meaning of a power by representing the relationship between the base (whole number) and the exponent (whole number) (e.g., 3^3, 4^3); and the effect on the magnitude of a whole number when multiplying or dividing it by a whole number, decimal, or fraction.	**SE/TE:** 2, 37, 38, 40-41, 42, 54, 162-165, 170, 206, 263-264, 271, 274, 444, 570, 587
M(N&O)–6–4 **Accurately solves problems involving** single or multiple operations on fractions (proper, improper, and mixed), or decimals; and addition or subtraction of integers; percent of a whole; or problems involving greatest common factor or least common multiple.	**SE/TE:** 32-35, 38-41, 44-47, 171-174, 188-191, 217-220, 222-225, 228-231, 261-264, 266-270, 272-275, 276-279, 336-339, 524-527, 530-533
Measurement	
M(G&M)–6–1 **Uses properties or attributes of angles** (right, acute, or obtuse) **or sides** (number of congruent sides, parallelism, or perpendicularity) **to identify, describe, classify, or distinguish** among different types of triangles (right, acute, obtuse, equiangular, scalene, isosceles, or equilateral) or quadrilaterals (rectangles, squares, rhombi, trapezoids, or parallelograms).	**SE/TE:** 380-383, 387-389, 391, 392, 409, 410, 414, 424, 626, 627
M(G&M)–6–3 **Uses properties or attributes** (shape of bases, number of lateral faces, number of bases, number of edges, or number of vertices) **to identify, compare, or describe three-dimensional shapes** (rectangular prisms, triangular prisms, cylinders, spheres, pyramids, or cones).	**SE/TE:** 449-452, 461, 469, 584, 628, 629

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M(G&M)–6–5 **Demonstrates conceptual understanding of similarity** by describing the proportional effect on the linear dimensions of polygons or circles when scaling up or down while preserving the angles of polygons, or by solving related problems (including applying scales on maps). Describes effects using models or[sc] explanations.	**SE/TE:** 326-329, 335, 356, 393-395, 396-397, 409, 410, 411, 603, 624, 626, 627
M(G&M)–6–6 **Demonstrates conceptual understanding of perimeter** of polygons, **the area of** quadrilaterals or triangles, and **the volume of** rectangular prisms by using models, formulas, or by solving problems; and **demonstrates understanding of the relationships of circle measures** (radius to diameter and diameter to circumference) by solving related problems. Expresses all measures using appropriate units.	**SE/TE:** 426-429, 431, 432-435, 436, 437, 438-441, 447, 458-460, 461, 468-469, 470, 551, 603, 628, 629
M(G&M)–6–7 **Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems** across the content strands.	**SE/TE:** 292-295, 420, 421-424, 426-430, 432-435, 436, 439-441, 445-447, 454-456, 457, 459-460, 461, 462-466, 468-469, 470
Functions and Algebra	
M(F&A)–6–1 **Identifies and extends to specific cases a variety of patterns** (linear and nonlinear) represented in models, tables, sequences, graphs, or in problem situations; or writes a rule in words or symbols for finding specific cases of a linear relationship; or writes a rule in words or[sc] symbols for finding specific cases of a nonlinear relationship; and writes an expression or[sc] equation using words or[sc] symbols to express the **generalization** of a linear relationship (e.g., twice the term number plus 1 or[sc] $2n + 1$).	**SE/TE:** 108-111, 112, 119, 121, 123, 127, 129, 141, 150, 152, 558-562, 565, 566, 616, 632
M(F&A)–6–2 **Demonstrates conceptual understanding of linear relationships** ($y = kx$; $y = mx + b$) **as a constant rate of change** by constructing or interpreting graphs of real occurrences and describing the slope of linear relationships (faster, slower, greater, or smaller) in a variety of problem situations; **and describes how change in the value of one variable relates to change in the value of a second variable** in problem situations with constant rates of change.	**SE/TE:** 559-560, 632, 633

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M(F&A)–6–3 **Demonstrates conceptual understanding of algebraic expressions** by using letters to represent unknown quantities to write linear algebraic expressions involving <u>two or more of the four operations</u>; or by evaluating linear algebraic expressions (<u>including those with more than one variable</u>); or by <u>evaluating an expression within an equation (e.g., determine the value of y when $x = 4$ given $y = 3x - 2$).</u>	**SE/TE:** 114-116, 120-122, 129, 150, 152, 153, 264, 270, 275, 279, 558-562, 565, 567, 616, 632
M(F&A)–6–4 **Demonstrates conceptual understanding of equality** by showing equivalence between two expressions using models or different representations of the expressions (expressions consistent with the parameters of <u>M(F&A)–6–3</u>), <u>solving multi-step linear equations of the form $ax \pm b = c$, where a, b, and c are whole numbers with $a \neq 0$.</u>	**SE/TE:** 572-576, 585, 598, 600, 602, 634
Data Statistics, and Probability	
M(DSP)–6–1 **Interprets a given representation** (circle graphs, line graphs, or <u>stem-and-leaf plots</u>) to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems.	**SE/TE:** 75, 77, 79, 86, 88-90, 93, 95-96, 102, 341-344, 356, 383, 401, 405, 456, 555-557
M(DSP)–6–2 **Analyzes patterns, trends or distributions in data in a variety of contexts by determining or using** measures of central tendency (mean, median, or mode) or <u>dispersion (range)</u> to analyze situations, or to solve problems.	**SE/TE:** 60, 61-64, 66-69, 70-73, 77, 83, 85, 86, 90, 92, 94-96, 98, 99, 100, 102
M(DSP)–6–4 **Uses counting techniques to solve problems** in context involving combinations or simple permutations using a variety of strategies (e.g., organized lists, tables, tree diagrams, models, <u>Fundamental Counting Principle</u>, or[sc] others).	**SE/TE:** 476-480, 481, 487, 508, 510, 603, 630
M(DSP)–6–5 **For a probability event in which the sample space may or may not contain equally likely outcomes, determines** the experimental or theoretical probability of an <u>event in a problem-solving situation</u>.	**SE/TE:** 482-486, 487, 488-491, 492, 498, 499, 501-503, 504, 505-506, 508-509, 510, 511, 512, 603, 630-631

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