

Prentice Hall Mathematics, Course 2 © 2008
 Correlated to:
 NECAP Grade Level Expectations (GLEs) for Math Grade 7

NECAP GRADE LEVEL EXPECTATIONS FOR MATH GRADE 7	PAGE(S) WHERE TAUGHT (If submission is not a text, cite appropriate resource(s))
Number and Operations	
M(N&O)-7-1 Demonstrates conceptual understanding of rational numbers with respect to percents as a means of comparing the same or different parts of the whole when the wholes vary in magnitude (e.g., 8 girls in a classroom of 16 students compared to 8 girls in a classroom of 20 students, or 20% of 400 compared to 50% of 100); and percents as a way of expressing multiples of a number (e.g., 200% of 50) using models, explanations, or other representations*.	SE/TE: 283, 289, 293, 301
M(N&O)-7-2 Demonstrates understanding of the relative magnitude of numbers by ordering, comparing, or identifying equivalent rational numbers across number formats, numbers with whole number bases and whole number exponents (e.g., 3^3 , 4^3), integers, absolute values, or numbers represented in scientific notation using number lines or equality and inequality symbols.	SE/TE: 32-34, 35, 42, 61, 62, 96-100, 108-109, 113, 114, 205, 208, 279-283, 288, 322, 530
M(N&O)-7-4 Accurately solves problems involving proportional reasoning; percents involving discounts, tax, or tips; and rates.	SE/TE: 232-235, 237, 244-248, 249-250, 252-255, 257, 259-263, 264, 265, 266-267, 268, 294-297, 304-307, 309, 317
Measurement	
M(G&M)-7-1 Uses properties of angle relationships resulting from two or three intersecting lines (adjacent angles, vertical angles, straight angles, or angle relationships formed by two non-parallel lines cut by a transversal), or two parallel lines cut by a transversal to solve problems.	SE/TE: 332-334
M(G&M)-7-2 Applies theorems or relationships (triangle inequality or sum of the measures of interior angles of regular polygons) to solve problems.	
M(G&M)-7-4 Applies the concepts of congruency by solving problems on a coordinate plane involving reflections, translations, or rotations.	SE/TE: 511-513, 515-517, 520-522, 525, 526, 527, 547, 621, 648
M(G&M)-7-5 Applies concepts of similarity by solving problems involving scaling up or down and their impact on angle measures, linear dimensions and areas of polygons, and circles when the linear dimensions are multiplied by a constant factor. Describes effects using models or ^{sc} explanations.	SE/TE: 256

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M(G&M)–7–6 Demonstrates conceptual understanding of the area of circles or the area or perimeter of composite figures (quadrilaterals, triangles, or parts of circles), and the surface area of rectangular prisms, or volume of rectangular prisms, triangular prisms, or cylinders using models, formulas, or by solving related problems. Expresses all measures using appropriate units.	SE/TE: 383, 390-392, 393, 395-397, 398-399, 415-417, 421-425, 428-429, 430, 431, 432, 489, 507, 644, 645
Functions and Algebra	
M(F&A)–7–1 Identifies and extends to specific cases a variety of patterns (linear and nonlinear) represented in models, tables, sequences, graphs, or in problem situations; and generalizes a linear relationship using words and symbols; generalizes a linear relationship to find a specific case; or writes an expression or^{sc} equation using words or^{sc} symbols to express the generalization of a nonlinear relationship.	SE/TE: 442-445, 446-449, 450, 453-455, 457-459, 465, 475, 478-479, 480, 493-494, 496-497, 527, 553, 570, 646
M(F&A)–7–2 Demonstrates conceptual understanding of linear relationships ($y = kx$; $y = mx + b$) as a constant rate of change by solving problems involving the relationship between slope and rate of change, by describing the meaning of slope in concrete situations, or informally determining the slope of a line from a table or graph; and distinguishes between constant and varying rates of change in concrete situations represented in tables or graphs; or 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: 498-501, 502, 503, 526
M(F&A)–7–3 Demonstrates conceptual understanding of algebraic expressions by using letters to represent unknown quantities to write algebraic expressions (including those with whole number exponents or more than one variable); or by evaluating algebraic expressions (including those with whole number exponents or more than one variable); or by evaluating an expression within an equation (e.g., determine the value of y when $x = 4$ given $y = 5x^3 - 2$).	SE/TE: 169-172, 191, 194, 196-197, 220, 222, 434, 453-455, 457-459, 479, 480, 484, 620, 636, 646

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M(F&A)–7–4 Demonstrates conceptual understanding of equality by showing equivalence between two expressions (<u>expressions consistent with the parameters of the left- and right-hand sides of the equations being solved at this grade level</u>) using models or different representations of the expressions, solving multi-step linear equations of the form $ax \pm b = c$ with $a \neq 0$, $ax \pm b = cx \pm d$ with $a, c \neq 0$, and $(x/a) \pm b = c$ with $a \neq 0$, where a, b, c and d are whole numbers; or by <u>translating a problem-solving situation into an equation consistent with the parameters of the type of equations being solved for this grade level</u> .	SE/TE: 175-177, 181, 183-184, 187, 189-190, 191, 192-193, 196-198, 199, 200-204, 209, 221, 222, 434, 636-637
Data Statistics, and Probability	
M(DSP)–7–1 Interprets a given representation (circle graphs, <u>scatter plots that represent discrete linear relationships</u> , or <u>histograms</u>) to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems.	SE/TE: 85, 129, 303, 354, 356-357, 359-360, 536, 566, 568-570, 573, 574, 650
M(DSP)–7–2 Analyzes patterns, trends, or distributions in data in a variety of contexts by solving problems using measures of central tendency (mean, median, or mode), dispersion (range or variation), or <u>outliers</u> to analyze situations to <u>determine their effect on mean, median, or mode</u> ; and <u>evaluates the sample from which the statistics were developed (bias)</u> .	SE/TE: 53-57, 58, 61, 62, 530, 544-547, 551-552, 559, 560-561, 563-564, 565, 621, 650
M(DSP)–7–3 Identifies or describes representations or elements of representations that best display a given set of data or situation , consistent with the representations required in M(DSP)–7–1.	SE/TE: 541, 547, 548, 553
M(DSP)–7–5 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 event in a problem-solving situation.	SE/TE: 580-583, 586-589, 590, 591-595, 596, 597, 598-602, 604-605, 609, 614, 616-617, 618, 621, 652, 653