Pacing Chart for Intermediate Algebra 1-2– Prentice Hall(PH)
Regular Schedule/Block Schedule

2009-2010

Dates	Number of Regular / Block Days	Chapter & State Standard (*70% or more of CST)	Essential Sections and CST Section (CS) (*70% or more of CST)	Hands-On Activities (HOA), Technology Activities (TechA), Int. Alg. Idea Book (IAIB), Investigations, LBUSD Intranet	Essential Question	Assessment Portfolio Student Workbook
9/10 – 9/17	6/3	**Ch 1: Tools of Algebra** 1.0*: Students solve equations and inequalities involving absolute value. 11.2* Students judge the validity of an argument according to whether the properties of real numbers, exponents, and logarithms have been applied correctly at each step.	1-1 (CS 11.2*) 1-2 (Reviews Gr. 7: AF 1.0) 1-3 (Reviews Alg 1: 5.0) 1-4 (Reviews Alg 1: 5.0) 1-5 (CS 1.0*), *[1-6 Enrichment]* Chapter Review, Chapter Test		When engineers design a part, they specify the allowable variation, or tolerance, in the size of the part. What equation or inequality is necessary to determine the correct specifications?	1-3: p.2 #1 p.8 #1 1-4: p.4 #26 1-5: p.2 #2, 4 p.8 #4-5 p.37-38 #1-11
9/18 – 10/06	13/6.5	**Ch 2: Functions, Equations, and Graphs** 1.0*: Students solve equations and inequalities involving absolute value.	2-1 (Reviews Alg 1: 16.0) 2-2 (Reviews Alg 1: 7.0) pg. 71 2-3 (Reviews Alg 1: 16.0) *[2-4 Enrichment]* 2-5 (Reviews Alg 1: 6.0) 2-6 (Reviews Geom: 22.0) 2-7 (Reviews Alg 1: 6.0) Chapter Review, Chapter Test	2-2: TechA 27 p. 58 2-3: IAIB LE4-LE5	How does the study of linear functions help in the design and building of bridges?	2-1: p.2 #6 p.3 #14 p.10 #16 p.53 #1-7 2-2: p.3 #16 p.11 #29 p.34 #1-4 p.35 #7-10 2-3: p.2 #3 p.8 #2 p.17 #1-10 2-5: p.3 #17 p.38 #12, 13
10/07 – 10/17	9/4.5	**Ch 3: Linear Systems** 2.0*: Students solve systems of linear equations and inequalities (in two or three variables) by substitution, with graphs, or with matrices.	3-1 (CS 2.0*) 3-2 (CS 2.0*) 3-3 (CS 2.0*) 3-4 (CS 2.0*) *[3-5 Enrichment]* 3-6 (CS 2.0*) Review, Assessment	3-1: HOA 36 p. 36	How can the knowledge of systems of equations be used in solving real-world problems, such as, deciding on the planting of trees to maximize carbon dioxide absorption?	3-1: p.2 #7 p. 39 #1 3-2: p.39 #2-5 p.40 #7-8 3-3: p. 4 #25 p. 12 #30 p. 40 #9-11 3-4: p. 41 #12-13 3-6: p.39 #6
10/20 – 10/29	8/4	**Ch 5: Quadratic Equations and Functions** 3.0*: Students are adept at operations on polynomials, including long division. 4.0*: Students factor polynomials representing the difference of squares, perfect square trinomials, and the sum and difference of two cubes. 8.0*: Students solve and graph quadratic equations by factoring, completing the square, or using the quadratic formula. Students apply these techniques in solving word problems. They also solve quadratic equations in the complex number system.	5-1 (CS 3.0* & 10.0*) 5-2 (CS 9.0* & 10.0*) 5-3 (CS 9.0*) 5-4 (CS 4.0*) 5-5 (CS 8.0* & 10.0*)	5-1: IBIA Q3-Q16 Q17-Q33 Q34 5-2: HOA 40 p.40 IBIA Q35-Q36	How are complex numbers used in the study of quadratic functions?	5-1: p.14 #50 5-2: p.7 #57 p.52 #19-20 5-3: p.4 #23 5-4: p.4 #20, 27 p.9 #13, 14 p.46 #27,29 5-5: p.6 #43 p.50 #1-9

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		9.0*: Students demonstrate and explain the effect that changing a coefficient has on the graph of quadratic functions; that is, students can determine how the graph of a parabola changes as a, b, and c vary in the equation $y = a(x-b)^2 + c$. 10.0*: Students graph quadratic functions and determine the maxima, minima, and zeros of the function. (Continued after the 1st quarter exam)		5-3: IBIA Q37-Q43 5-4: IBIA Q44-Q45 5-5: HOA 41 p.41		p.51 #16-17
10/30 – 11/04	4/2	First Quarter Practice Exam **First Quarter Exam**	1.1 – 5.5 (See above)			
11/5 – 11/17	8/4	**Ch 5: Quadratic Equations and Functions (cont.)** 4.0*: Students factor polynomials representing the difference of squares, perfect square trinomials, and the sum and difference of two cubes. 5.0*: Students demonstrate knowledge of how real and complex numbers are related both arithmetically and graphically. In particular, they can plot complex numbers as points in the plane. 6.0*: Students add, subtract, multiply, and divide complex numbers. 8.0*: Students solve and graph quadratic equations by factoring, completing the square, or using the quadratic formula. Students apply these techniques in solving word problems. They also solve quadratic equations in the complex number system.	5-6 (CS 5.0*, 6.0*, 8.0*) 5-7 (CS 4.0* & 8.0*) 5-8 (CS 8.0*) Chapter Review, Chapter Test	5-8: IBIA Q62	How are complex numbers used in the study of quadratic functions?	5-5: p.6 #43 p.50 #1-9 p.51 #16-17 5-6: p.5 #29, 32 p.6 #45 p.11 #26, 27 p.48 & 49 5-7: p.5 #38 p.7 #52 p.50 #10 5-8: p.2 #9 p.5 #38 p.11 #23, 24 pgs.50-51 #11-15
11/18– 12/9	14/7	**Ch 6: Polynomials and Polynomial Functions** 3.0*: Students are adept at operations on polynomials, including long division. 4.0*: Students factor polynomials representing the difference of squares, perfect square trinomials, and the sum and difference of two cubes. 10.0*: Students graph quadratic functions and determine the maxima, minima, and zeros of the function. 18.0* Students use fundamental counting principles to compute combinations and permutations. 19.0* Students use combinations and permutations to compute probabilities. 20.0* Students know the binomial theorem and use it to expand binomial expressions that are raised to positive integer powers.	6-1 (CS 10.0*) 6-2 (CS 3.0*) 6-3 (CS 3.0*) 6-4 (CS 4.0*) *[6-5: Enrichment]* *[6-6: Enrichment]* 6-7 (CS 18.0* & 19.0*) (supplement Fundamental Counting Principle using IBIA: C5) 6-8 (CS 19.0* & 20.0*) Chapter Review, Chapter Test	6-1: IBIA Q46-Q61 6-3: HOA 43 pg.44 6-4: IBIA Q44-Q45 6-8: IBIA C3-C4	How can a polynomial function determine how long a kicked soccer ball will stay in the air before hitting the ground?	6-1: p.3 #15, 18 p.9 #9 pgs.45-47 #1-32 6-3: p.4 #24 p.9 #10 6-4: p.4 #21 p.9 #15 6-7: p.6 #51 p.7 #54 p.8 #7 p.9 #8 p.69 #1-20 6-8: p.2 #10 p.6 #48 p.13 #43 p.32 #1-8

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12/10 – 1/19	18/9	**Ch 7: Radical Functions and Rational Exponents** 7.0*: Students add, subtract, multiply, divide, reduce, and evaluate rational expressions with monomial and polynomial denominators and simplify complicated rational expressions, including those with negative exponents in the denominator. 11.2* Students judge the validity of an argument according to whether the properties of real numbers, exponents, and logarithms have been applied correctly at each step. 12.0*: Students know the laws of fractional exponents, understand exponential functions, and use these functions in problems involving exponential growth and decay. 15.0*: Students determine whether a specific algebraic statement involving rational expressions, radical expressions, or logarithmic or exponential functions is sometimes true, always true, or never true. 24.0: Students solve problems involving functional concepts, such as composition, defining the inverse function and performing arithmetic operations on functions. 25.0 Students use properties from number systems to justify steps in combining and simplifying functions.	7-1 (CS 11.2* & 15.0*) 7-2 (CS 7.0* & 15.0*) 7-3 (CS 7.0* & 11.2*) 7-4 (CS 12.0*) 7-5 (CS 12.0*) 7-6 (CS 24.0 & 25.0) 7-7 (CS 24.0 & 25.0) 7-8 (CS 15.0*) Chapter Review, Chapter Test	7-8: TechA 31 pg.66	How does the study of radical functions and rational exponents help in the use of formulas for energy, gravitational force, and the stopping distance of a moving car?	7-4: p.3 #12 p.12 #32, 33 7-5: p.2 #5 p.5 #31 p.10 #18 p.12 #35 7-6: p.5 #30 p.10 #19 pgs.53-54 #10-18 7-7: p.5 #34 p.10 #17 p16
1/20 – 1/25	4/2	**Cumulative Review**	Review for Final Exam Chapters 1 – 3, 5 - 7	Intermediate Algebra: First Quarter Review		
1/26 – 1/29	4	**Finals Week, 1st Semester**	Semester Final Exam Chapters 1 – 3, 5 - 7			
2/01– 2/24	16/8	**Ch 8: Exponential and Logarithmic Functions** 11.0* Students prove simple laws of logarithms. 11.1* students understand the inverse relationship between exponents and logarithms, and use this relationship to solve problems involving logarithms and exponents. 11.2* Students judge the validity of an argument according to whether the properties of real numbers, exponents, and logarithms have been applied correctly at each step. 12.0*: Students know the laws of fractional exponents, understand exponential functions, and use these functions in problems involving exponential growth and decay. 13.0 Students use the definitions of logarithms to translate between logarithms in any base. 14.0 Students understand and use the properties of logarithms to simplify logarithmic numeric expressions and to identify their approximate values. 15.0*: Students determine whether a specific algebraic statement involving rational expressions, radical expressions, or logarithmic or exponential functions is sometimes true, always true, or never true.	8-1 (CS 12.0*) 8-2 (CS 12.0*) 8-3 (CS 11.2*, 14.0) 8-4 (CS 11.0*, 11.1*, 11.2*, 14.0, 15.0*) 8-5 (CS 13.0 & 14.0) 8-6 (CS 14.0 & 15.0*) Chapter Review, Chapter Test	Ch 8: IBIA L3-L16 L17-L21 8-1: HOA 47 pg.48 8-2: TechA 30 pg.64 8-5: HOA 48 pg.49 *8-6: TechA 32 (Enrichment) pg.68* Graphing Exponential Equations Graphing Logarithms	How do exponential functions or logarithmic equations determine the depreciation value of a used car or the magnitude of an earthquake?	8-1: p.10 #20 p.12 #36 8-3: p.5 #39 p.12 #34 8-4: p.5 #40 p.13 #38 8-5: p.5 #35, 36 p.12 #37 p.13 #40 8-6: p.6 #44 p.13 #41 Ch. Rev: pgs.57-59 #1-28

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2/25 – 3/12	12/6	**Ch 9: Rational Functions** 7.0*: Students add, subtract, multiply, divide, reduce, and evaluate rational expressions with monomial and polynomial denominators and simplify complicated rational expressions, including those with negative exponents in the denominator. 15.0*: Students determine whether a specific algebraic statement involving rational expressions, radical expressions, or logarithmic or exponential functions is sometimes true, always true, or never true. Probability and Statistics: 1.0: Students know the definition of the notion of *independent events* and can use the rules for addition, multiplication, and complementation to solve for probabilities of particular events in finite sample spaces.	9-1 (CS 7.0*) 9-2 (CS 15.0*) 9-4 (CS 7.0*) 9-5 (CS 7.0*) 9-6 (CS 7.0* & 15.0*) 9-7 (CS Probability and Statistics 1.0) Chapter Review, Chapter Test	9-2: HOA 49 pg.50 *[9-3: TechA 33 (Enrichment) pg.70]* 9-4: HOA 50 pg.51 9-5: IBIA L31-L42	Show, using an inverse variation function, how the pitch of a musical instrument can be determined.	9-1: p.4 #22 p.8 #3 9-2: p.3 #19 9-4: p.6 #46 p.7 #56 p.9 #11 9-5: p.6 #49 p.9 #12 9-6: p.7 #55 p.10 #21,22 9-7: p.7 #60 p.8 #6 Ch rev: pgs.60-61 #1-20
3/15 – 4/01	14/7	**Ch 11: Sequences and Series** 21.0: Students apply the method of mathematical induction to prove general statements about the positive integers. 22.0: Students find the general term and the sums of arithmetic series and of both finite and infinite geometric series. 23.0* Students derive the summation formulas for arithmetic and for both finite and infinite geometric series. Probability and Statistics: 2.0: Students know the definition of *conditional probability* and use it to solve for probabilities in finite sample spaces. 7.0: Students compute the variance and the standard deviation of a distribution of data.	11-1 (CS 22.0) 11-2 (CS 22.0) 11-3 (CS 22.0) 11-4 (CS 22.0 & 23.0*) 11-5 (CS 21.0, 22.0, 23.0*)	11-1: HOA 53 pg.54 11-4: HOA 54 pg. 55 11-5: Investigation p.613 *[11-5: TechA 35 (Enrichment) pg.7* 11-6: (Enrichment)	Patterns can be described by mathematical sequences. Which famous mathematical sequence is especially useful in the study of nature?	11-1: p.3 #11 p.13 #39 p.25 #1-10 11-2: p.6 #50 11-3: p.24 #1-28 p.26 #1-14 11-4: p.6 #47 p.13 #42
4/02 – 4/13 includes spring break	3/1.5	Third Quarter Practice Exam (Review 8-1 to 11-5) **Third Quarter Exam**	8-1 to 11-5 (See above)			

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4/14 – 4/30	13/6.5	**Ch 12: Probability and Statistics (includes 1-6 & 9-7)** 21.0: Students apply the method of mathematical induction to prove general statements about the positive integers. 22.0: Students find the general term and the sums of arithmetic series and of both finite and infinite geometric series. 23.0* Students derive the summation formulas for arithmetic and for both finite and infinite geometric series. Probability and Statistics: 2.0: Students know the definition of *conditional probability* and use it to solve for probabilities in finite sample spaces. 7.0: Students compute the variance and the standard deviation of a distribution of data.	1-6 (Reviews Gr. 6: SDAP 3.0) 9-7 (CS Probability and Statistics 1.0) 12-2 (CS Probability and Statistics 2.0) 12-4 (CS Probability and Statistics 7.0) Chapter Review, Chapter Test			
4/26 – 4/30	5/2.5	**State Testing**				
5/03 5/19	13/6.5	**Ch 10: Quadratic Relations** 16.0: Students demonstrate and explain how the geometry of the graph of a conic section e.g., asymptotes, foci, eccentricity) depends on the coefficients of the quadratic equation representing it. 17.0: Given a quadratic equation of the form $ax^2 + by^2 + cx + dy + e = 0$. Students can use the method for completing the square to put the equation into standard form and can recognize whether the graph of the equation is a circle, ellipse, parabola, or hyperbola. Students can then graph the equation.	10-1 (CS 16.0 & 17.0) 10-2 (CS 16.0 & 17.0) 10-3 (CS 16.0 & 17.0) 10-4 (CS 16.0 & 17.0) 10-5 (CS 16.0 & 17.0)	10-1 Investigation p.534 *[10-2: TechA 29 (Enrichment) pg.62]* 10-4: HOA 51 pg.52 *[10-4: TechA 34 (Enrichment) pg.71]*	Which conic section describes the path of a sonic boom created by an airplane flying faster than the speed of sound?	10-2: p.11 #25 10-4: p.7 #59, 61 p.14 #46 10-5: p.14 #47 10-6: p.7 #58 p.14 #48 p.18 #1-12 p.19 #1-10 p.20 #1-9 Ch rev: pgs.21-22 #1-6 p.23 #1-8 pgs.63-66 #1-24 Solving Quadratic Systems pg.7 #41, p.14 #49
5/20 – 6/04	11/5.5	**Ch 4: Matrices** 2.0*: Students solve systems of linear equations and inequalities (in two or three variables) by substitution, with graphs, or with matrices.	4-1 (CS 2.0*) 4-2 (CS 2.0*) 4-3 (CS 2.0*) 4-5 (CS 2.0*) 4-7 (CS 2.0*) *[4-8 Enrichment]* Chapter Review, Chapter Test	4-5: IBIA LE3 *[4-8: (Enrichment) TechA 28 p. 60]* Writing the Equation of a Translated Ellipse Hyperbolas: Definitions and Properties	How are matrices useful in the organization of data?	4-1: p. 42 #1 4-2: p. 42 #3-4 4-3: p.4 #28 p.13 #45 p. 42 #2, 5-7 4-5: p.5 #33 p.13 #44 p. 42 #8 p. 43 #9-10, 13 4-7: p. 43 #11, 12
6/07 – 6/10	4/2	**Cumulative Review**	Review for End-of-Course Exam			
6/11 – 6/16	4	**Finals Week, 2nd Semester**	End-of-Course Exam			

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