Algebra II **PCPS Pacing Guide (CIP)** **2017-2018**

Week	SOL	Unit	Topic	Book Reference Prentice Hall Algebra 2, 2012
Week 1	AII.4a	1	• Solving absolute value equations algebraically and with graphing calculator • Solving absolute value inequalities algebraically and with graphing calculator	Kuta Worksheets
Week 2	AII.4a, b AII.6 AII.7a, b, c, d, f	2	Parent functions, domain/range, x-intercepts, y-intercepts, increasing/decreasing, end behavior, transformations: • absolute value functions • quadratic functions • Cubic functions • Polynomials of degree >3	2-7 p. 111(17-30) 2-8 p. 118(8-26) 4-1 p. 199(15-34) 4-2 p. 206(8-25) 5-1 p. 285(20-37)
Week 3	AII.1 d	3	• Factoring polynomials by GCF • Factoring quadratics in one variable • Factoring quadratics in two variables • Factoring cubics	Kuta worksheets 4-4 p. 221(14-58)
Week 4	AII.4 b	4	Solving quadratic functions: • by factoring • by graphing: CALC zero • by taking square roots • with quadratic formula Evaluate discriminant: • determine number of real and/or complex solutions	4-5 p. 229(9-35) 4-6 p. 237(12-17) 4-7 p. 245(11-22, 25-36) 4-8 p. 253(33-44)
Week 5	AII.3	5	Complex number operations: • properties • simplify to a + bi form • simplify powers of i • add, subtract, multiply, divide • multiply by conjugate to get real number	4-8 p. 253(8-12, 18-26, 48-55)
Week 6	AII.8	6	Relationship between roots, zeros, x-intercepts, and factors: • Find zeros, given factors • Find polynomial, given zeros or factors • Find real solutions of polynomials by graphing: CALC zero or TABLE	5-2 p. 293(7-34) 5-3 p. 301(25-36)

Week 7	AII.1 a AII.4 c	7	Rational expressions and equations: • multiply, divide, simplify • find common denominator, add, subtract • solve	8-4 p. 531(8-25, 32-35) 8-5 p. 539 (11-21) 8-6 p. 546(8-19, 21-29)
Week 8	AII.7 a-f	8	Graphs of rational functions: • discontinuities, asymptotes, domain/range, x- and y-intercepts, transformations • utilize graphing calculator	8-2 p. 512(18-25) 8-3 p. 521(13-34)
Week 9	AII.5	15	Non-linear systems of equations (find intersection points): • linear-quadratic: solve graphically on calculator • quadratic-quadratic: solve graphically on calculator	4-9 p. 262(8-25, 31-36, 41-46)
Week 10	AII.1b	9	Radical expressions: • multiply and divide radical expressions • add and subtract radical expressions • rational exponents • converting between exponent and radical form	6-2 p. 371(10-42) 6-3 p.378(1-32, 38-47) 6-4 p. 386(10-34, 39-66, 79-87)
Week 11	AII.4 d	10	Solving radical equations: • square root equations containing one or two radicals • equations with higher roots or rational roots • checking for extraneous solutions • solve graphically on calculator	6-5 p. 395(9-23, 26-44)
Week 12	AII.7 h	11	Composition of a function: • Given f(x) and g(x), evaluate g(f(x)) for a given x. • Given f(x) and g(x), determine g(f(x)).	6-6 p. 402(27-44)
Week 13	AII.7 g	12	Inverse of a function: • Graph equation and its inverse • Find equation of the inverse of f(x) algebraically • Find the image of a certain point shown on the graph of f(x).	6-7 p. 410(12-29)
Week 14	AII.7 a-g	13	Graphs of logs and exponentials: • zeros, asymptotes, intercepts, domain/range • identify parent function or same family of function • Solve log and exponential equations on graphing calculator using CALC intersect or TABLE	7-1 p. 439(10-25) 7-2 p. 447(7-21) 7-3 p. 456(20-31, 40-43, 69-76) 7-4 p. 466(9-17, 30-37, 39-

				44) 7-5 p. 473(7-30)
Week 14	AII.10	14	• Direct variation • Inverse variation • Joint variation	2-2 p. 71(7-24) 8-1 p. 503(6-21, 26-40)
Week 15	AII.2	16	Sequences and series (formulas provided): • determine whether a sequence or series is arithmetic or geometric • find the nth term using recursive or explicit formula • write the first n terms • evaluate a sum • understand summation (sigma) notation	9-2 p. 575(7-31) 9-3 p. 584(7-24, 32-43) 9-4 p. 591(8-13) 9-5 p. 599(8-11, 26-31, 32-37)
Week 15	AII.12	17	Permutations and combinations (formulas provided) • distinguish between permutations and combinations • compute using graphing calculator: MATH probability nPr and nCr	11-1 p.678(21-28, 30-41)
Week 16	AII.11	18	Normal distributions (formulas provided): • given real-life scenario (μ, σ, x), construct normal distribution graph • memorize percentages (34-13.5-2.35-.15) and apply to finding probabilites • construct standard normal curve and calculate z-score • use table or graphing calculator (normalcdf) to find probabilities associated with area under the standard normal curve	Packet (Adapted from: VDOE ESS Algebra II)
Week 16	AII.9	19	Curve of best fit: • Enter data into graphing calculator (L1 and L2) • Display scatterplot: ZOOM stat. Use shape of scatterplot to determine best model for given data. • Given data, perform quadratic or exponential regression to determine associated function • Use regression equation to predict a y-value, given an x-value	4-3 p. 212 (1-26) Worksheets (exponential regression)
Weeks 17-18			SOL Review	